Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

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S. R. HOBBIE,
First Dpt. P. M. Gen'l.

Post-Office Department, Contract Office, May 28th, 1849.

WORK FOR OCTOBER, NORTH AND WEST.

General Remarks.—Any portion of the work omitted to be done in September, or impracticable to be performed from the state of the climate, as recommended in our last number, may be accomplished this month, such as — *sowing winter wheat and rye, the selection of seed corn, threshing grain, fumigating granaries, cutting and stacking corn, composting manure, draining wet lands, &c., &c.*

Fall Plowing.—All stiff, clayey lands, intended for spring crops, may be plowed this month, when the earth is neither too wet nor too dry. If plowed at the right time, and subjected to the winter frosts, the texture of the soil will be greatly improved.

Plowing and Planting for Orchards.—If you design to plant out a young orchard, either this fall, or next spring, the ground should now be twice thoroughly and deeply plowed, when not too wet, turning under at the second plowing a liberal coat of compost, formed of swamp muck, charcoal, wood ashes, and oyster-shell lime. At the extreme

north, the trees may be planted towards the close of this month, agreeably to the directions given at p. 330, of our sixth volume.

Trenching Old Orchards.—If you have any neglected old trees in your orchards, fork or trench up the earth all around their trunks for a distance of four or five feet, and give to each tree at least a bushel of compost, made of equal parts of stable manure and leaf mold, or swamp muck. And at the top of this, spread half a peck, each, of charcoal dust, wood ashes, and oyster-shell lime.

Felling Timber, Fencing Stuff, &c.—If circumstances require it, all non-resiniferous timber may be cut this and the next five months following, for reasons assigned at p. 362, vol. vii.

Gathering and Storing Winter Fruit.—Winter apples and pears should be carefully picked from the trees by hand, packed up in barrels, and stored in a cool, dry room, in which the temperature ranges, as near as possible, to the freezing point. If such a room should eventually become too cold, put them in an airy, dry cellar, sufficiently cool as not to allow them to freeze.

Cider Making.—This is the proper month for making cider, minute directions for which will be found at p. 247, of the current volume.

Harvesting and Storing Root Crops.—Carrots, sugar beets, and mangold-wurtzel should be well secured before the occurrence of heavy frosts. They should be perfectly matured, before they are pulled, which may be known by the yellowish color of some of their leaves. If allowed to remain unharvested beyond that time, a new elaboration of the juices takes place, and much of the saccharine principle, which is the fattening one, is destroyed.

Turnips and parsneps may be left in the ground until there is danger of freezing, and the latter, if not wanted for winter use, are all the better for remaining unpulled until spring. In this case, all the water must be carefully led away from the beds, otherwise, they might rot.

Potatoes, for winter keeping, should never be dug before they are ripe, which may generally be known by the decaying of the vines.

All kinds of culinary roots, after digging, should be protected from the sun, by throwing over them some leaves or straw, and as soon as the dirt attached to them becomes dry, let them be carried, at once, to the cellar, or pit, where they are to be stored. They should be kept from the air by putting them in barrels or bins, loosely covered with straw; and it would be still better for them to sift in between the interstices some fine, dry sand, or powdered, air-slacked lime. Such as are stored in the fields may be put in pits, where the ground is sandy and dry; or they may be piled up in conical or long heaps above the surface, at any height required. A coating of straw should first be laid over them, in the manner of thatching the roofs of buildings, in order to shed off the rain. In parts of the country subject to heavy frosts, or snow, the heaps should be covered with a layer of earth, sufficiently thick to prevent the roots from freezing; but care must be observed not to expose them, if possible, to a temperature above 38° or 40° F., as they then would be liable to heat, grow corky, and probably rot. The earthy covering for winter need not generally be completed till quite late in the season; as, by leaving the straw partially bare, the escape of moisture and heat from the roots will thereby be facilitated, which is all-important, immediately after they are thus stored. When finally covered over for the winter, a hole should be left at the top of the heap, or several, if the pile be long, in each of which a wisp of straw should be placed, for the escape of moisture and gas. If the ground be stiff and clayey, the heap should be surrounded by a ditch, at least a foot deep, so as to carry off all water that might accumulate from rain or melting snow; otherwise, the lowermost portions of the heaps would become wet and spoil.

Storing Winter Cabbages.—Such cabbages, at the extreme north, as you wish to keep through the winter and early spring, may be pulled up by the roots, and arranged in compact rows, with their heads downward, resting on the surface of the ground, so that their stalks will stand upright in the air; then, they may be covered with straw and earth, and treated in every other respect as directed for the root crops above.

Storing Pumpkins, &c.—Secure your winter squashes and pumpkins by placing them in a cool, dry place, where they will not freeze, and you may have the luxury of these vegetables until quite late in the spring.

Care and Management of Stock.—The remarks given in our hints for last month, in this department, are equally applicable to this. In addition thereto, it may be stated that cows, intended for milk, should be kept constantly in good condition; as, when they are disposed to become very lean, and that in the winter season, it is impossible that they can be brought to afford a large quantity of milk. When they are lean, at the period of calving, no after-management is capable of bringing them in a condition to produce, for that season, anything near the proportion of milk that they would have done, had they been kept in good order during the winter. Food of the most nourishing and succulent description, should be given them in suitable quantities during the cold months; and they should be well supplied with pure water and kept warm.

Kitchen Garden.—Keep your crops of lettuce and spinach entirely clean; they may now be thinned out, leaving the plants four or five inches apart. Those intended for late-fall or winter use should be transplanted into frames, and protected from frost at night. The same plan may be adopted for other vegetables intended for winter use. Toward the end of this month, top asparagus, and give the beds a coat of well-rotted, stable manure, two or three inches deep.

Fruit Garden and Orchard.—Continue propagating by cuttings and layers as long as the season will permit. Plant beds of strawberries that may have been omitted last month. Allow your Isabella and other grapes to become perfectly ripe before they are plucked.

Flower Garden and Pleasure Grounds.—Continue to sow the seeds of bulbous and tuberous-rooted flowers. Transplant biennial and perennial roots of flowers. Lift the bulbs and tubers of gladioluses, tuberoses, dahlias, &c., as soon as the tops have been killed by the frost. Ornamental trees

and shrubs may now be propagated by suckers. Lay out new pleasure grounds.

WORK FOR OCTOBER, SOUTH.

General Remarks.—Most of the hints given for the Work for September, South, will be applicable to this month, as *harvesting cotton, sowing oats, wheat, rye, &c., &c.*

Preparation for the Cane Harvest.—In the course of this month, let the planter get everything in readiness for cutting and grinding sugar cane. If necessary, repair the roads leading from the cane fields to the mill; put in order your carts and yokes; procure and sharpen the knives or hooks for cutting the cane; see that the sugar mill, or rollers, is proporly geared, well oiled, and clean. If your business will warrant it, procure, by all means, a steam engine, rather than use horses or mules. See that your boilers are well set, and that the flues are strong, as well as clear of filth. Put all minor utensils in good order, as the conductors, or gutters, coolers, vats, hogsheads, boxes, &c. Read all works, also, in your power, on the modern improvements in sugar making.

Planting Cane.—By the last of this month, in Florida, Texas, and Louisiana, more or less of the cane will have arrived at its usual maturity, from which you should provide for your future crops. Give early attention to the saving of your cane for planting, on account of the injury it receives from frosts, which are liable to occur by or before the middle of next month. This plant is always propagated by cuttings, which should be obtained from the best cane of the preceding season. From the use of unripe tops, and close, negligent planting, it is supposed the Creole cane has degenerated to its present diminutive size. There is less vigor and growth usually from tops than from the ripened cane; though where these are matured and a portion of the ripe stalk is left with it, the resulting crops, under the most favorable circumstances, are scarcely distinguishable. Fine growth frequently follows planting the tops, where the land is new and fertile; but it is the exception and not the rule. Good husbandry dictates a reliance on sound, mature cane only, for general use. There is no doubt, that in accordance with the general laws of vegetation, the cane crop would be benefitted by a change of the plant cane from one section of country to another. But as this would be attended with so much trouble and expense as to preclude the undertaking, the only remaining means available for securing improvement, or preventing deterioration, is to be found in planting the best qualities of healthy cane.

In order to preserve the cane, it is kept from the period of cutting till planting, simply by placing it on a dry surface of the field, in beds, or "mattresses," as they are technically termed, of about two feet in depth, and having the tops shingling, or overlapping, the ripe portion of the stalk. The tops should lie towards the south, to prevent their being lifted and frozen from severe north winds, which sometimes occur. Thick beds preserve a more uniform temperature, and repel the approach both of frost and the rays of the sun; thus serving the double purpose, besides their preservation from frost, of preventing fermentation during fall and winter, and germination on the approach of spring.

It is well to preserve an excess of cane for planting, as continued and severe spring frosts may cut down and destroy so many young shoots, as to leave a deficiency, unless partially replanted. Many think the cane will keep better by being cut soon after a rain, so as to be bedded with the sap vessels full, and that dry rot follows when cut after a long drought. Some, however, allow it to lie on the ground and wilt for two or three days after cutting, and think, when thus treated, it keeps equally well.

Storing Sweet Potatoes.—In the latter part of this month, or early in November, prepare for preserving sweet potatoes for winter and spring. Select a dry spot, level the ground, and lay down a bed of straw, so as to form a circle about six feet in diameter. On this straw, pile up the potatoes until they form a cone four or five feet high, over which spread a little dry grass or straw. Cover the entire cone with corn stalks, set up endwise, with the buts resting on the ground, and the tops reaching over the apex of the heap, sufficiently thick to conceal the potatoes. Then cover the whole pile with earth, at least a foot thick, without leaving any air hole at the top, as is frequently the case. A temporary shelter should then be made over the cone, so as to prevent the rains from washing off the earth. This may be done by setting in the ground near the base of the pile four forked stakes, on which rails or small poles may be placed, to support a covering of bark, rough boards, or thatch. Potatoes can be preserved in this manner until June, nearly as fresh as when new.

Kitchen Garden.—Sow beets, turnips, onions, cabbages, (early and large sorts,) radishes, (round and long,) lettuce, celery, chervil, endive, cress, spinach, Windsor and pole beans, lentils, mustard, sorrel, parsley, and roquet. Transplant asparagus and strawberries; also cabbage roots for seed. Dress artichokes, take away all their suckers but three to each stalk, open their roots, lay about them new earth and manure, and plant out suckers for another crop.

Fruit Garden, Shrubbery, &c.—At the end of this month, transplant all kinds of trees and shrubs except oranges and lemons.

DR. CLOUD'S SEED WHEAT.—We have just received a letter from Dr. Cloud, of La Place, Macon county, Alabama, in which he says, that the severe frost, on the 15th of April last, almost entirely destroyed his wheat. At that time, it was very promising, and he hoped to have grown seed enough to furnish all his friends with his choice variety. He desires us to inform all those gentlemen who have applied to him for some of this wheat, that he has carefully filed away their letters, and if he is fortunate enough another year to save a good crop of seed, he will see that they are all abundantly supplied.

SOLON ROBINSON.—To the numerous enquirers after Mr. R., it gives us pleasure to say, that, after a brief visit to his family in Indiana, he has returned to this city, and is again our active and efficient agent in the field of agriculture. We shall detail his intended winter rout next month.

NINTH ANNUAL SHOW AND FAIR OF THE N. Y. State Agricultural Society.

This was held at Syracuse, on the 11th, 12th, and 13th days of September. The ground occupied by the society was on an elevated point, overlooking the city and adjacent country, and about a mile northwardly from the central portion of it. The enclosure was ample for everything contained within it, but the inequalities of its surface made it somewhat inconvenient for many of the animals, and especially such of the horses as were required to exhibit their best paces. The same desirable arrangment of shade for the cattle was secured, as the year previous, at Buffalo, and which, we hope, will never hereafter be omitted. The necessity for it was never more urgent, for the whole week was one of unmitigated drought and scorching sun, almost unparalleled at this season of the year. It was from this cause, and the immense clouds of dust that enveloped every avenue, the ceaseless tide of visitors thronging every part of the place, equally without as within the enclosure, and the numberless animals and articles exhibited, each claiming its share of attention, that exposure, toil and weariness were intimately allied to the gratification which any intelligent visitor could not fail to receive. The railroads, canals, and principal wagon roads leading to the place, were each loaded to repletion, and every train and vehicle was seriously incommoded by its fellow.

The crowd, inconvenience, and bustle necessary to these annual gatherings, is greatly augmented by the assemblage of every variety of gaudy show, or worthless vagabondism that the occasion will tolerate. As if it were not enough, that all the farmers of the state are solicited to bring their best specimens of animals, crops, &c., and examine the comparative merits of each, every other conceivable object calculated to attract attention, from president down to organ grinders were there, to swell the mob beyond all reasonable sufferance. We had regiments of tawdry militia, who might have been usefully employed in preserving order, instead of creating confusion; companies of holiday firemen, who could have made themselves useful, by allaying the dust rather than by exciting it; a circus, drawing 10,000 spectators to its fooleries; Fanny Kemble, with her Lears and Macbeths; the most notorious pugilists, that were opportunely kicked out of town by the municipal authorities before the rowdies had secured the preponderance; and conjurers and mountebanks of every descending grade. General Taylor, by a merciful dispensation of Providence, and equally for his own as others comfort, was not there; for, instead of the 100,000 said to have been congregated there on a single day, we might have witnessed another 50,000 in addition. We had other great men there, however, and many more who yet hoped to be; and to cap the climax, we were honored with a convention, made up of the file leaders and their assistants, from the converging wings of a great political party. Some future Bunyan can draw a more intensely-graphic picture of Vanity Fair, from actual reality, as here exhibited, than the most excited imagination has hitherto done.

Now, we put it to the good sense of the farmers of New York, whether they shall encourage, hereafter, by all reasonable means, or endeavor to repress, the tendency to associate pell mell, this incongruous mass of utility and nonsense, things befitting the occasion, and things utterly subversive of it. We care not how large the concourse may be, of the sincere admirers of agricultural objects, nor what may be the inconvenience following from it. All this we are willing to accept as a necessary part of the occasion. But we heartily deprecate the factitious influences brought into requisition by the publicans, the porters, and the purveyors of every sort, to stifle and suffocate the legitimate visitors on these occasions, by these spurious broods of auxiliaries, led thither for the purposes of notoriety and excitement by one party, and the hope of extortion and plunder by the other. These are faults of human nature, excessively aggravated by the energy of American character; and it is against the tendencies of these traits, that we would urge every possible precaution for the future.

The weather, as is common to the season of the year, was unclouded and dry. The excessive dust excited on these occasions within and near the show grounds, ought, hereafter, to be thoroughly saturated by watering carts. This should be made a binding condition on the part of any town, soliciting the presence of future shows, and one, we hope, the officers of the society will not fail to insist upon.

We noticed an economical arrangement for most of the necessary halls, offices, &c., for the accommodation of the various objects connected with the show. These have heretofore been almost exclusively constructed, at a large cost, of timber and boards; but in the present case, they were amply provided for, by immense awnings. These are more graceful than any hastily-erected wooden structures are likely to be, as they can be closed or have free ventilation as required, and the annual cost can scarcely be one tenth of the frame buildings.

Horses.—There was a very large show of these, embracing quite a variety of different specimens of blood, road, and work horses, many of which possessed great excellence. We did not, however, see any of the Normans nor Cleveland Bays, which were in considerable force, at Buffalo, last year. It is one of the great advantages in the annually-changing position of these shows, that they call out new specimens and varieties of animals and crops, which any stationary place would fail to exhibit. Thus we had a comparatively new exhibit of horses, quite unlike any shown last year—in some respects superior, and in others decidedly inferior. The same is true of

Cattle.—In this department there was double the number of good *Devon* bulls exhibited, we ever recollect to have before seen together. The location better suited the exhibition of Devons, than any other point in the state, as they have been bred in the surrounding counties, particularly in Otsego, in considerable numbers, for many years. Two cows, shown in this class by A. Stevens, were of large size, surpassing beauty, and perfection of form. Many others of the Devons were almost equally meritorious in appearance. We are glad to

see this favorite breed spreading over the fine feeding grounds of every part of this state.

The Short Horns were not behind the Devons in quantity nor merits, but they did not bear that excess in numbers they have generally done. The bull and two heifers, recently imported by Col. Sherwood and Mr. Stevens, were on the ground; and though in only indifferent condition, they received, as they richly deserved, the highest premiums, for their unmistakably high-bred qualities. There were many other very choice animals in this class upon the ground, one of which, belonging to Mr. Bell, of Westchester, was cheaply purchased at $400.

The *Herefords* were exhibited by their veteran importer Mr. Sotham, of Black Rock, Erie county, and by the Messrs. Bingham, of Vermont. The last were descendants of the importation of Messrs. Corning and Sotham, and equally with them, showed great merits of blood and breeding. Most of the latter were offered for sale, and they ought to command the favorable attention of graziers throughout the country.

Of *Ayrshires* there were not a large number on the ground. They were, principally from the herd of E. P. Prentice, of Albany, and possessed great merit; we saw a few others, without being able to learn their ownership.

Native and Grade Cattle.—Of the former, very few were shown, and most of these, we should think, were brought forward by some of the most inveterate sticklers for blood, to show off, by contrast, the wide disparity between the improved stock and the unadulterated native. They were incontestibly, lean specimens of a leaner species.

Some of the *grades* were magnificent, especially among the milking stock, fat, and working cattle. These were mostly crosses with the shorthorns, and evinced the rapid improvement these invaluable animals are capable of producing, when judiciously crossed with good subjects. The numbers did not compare with the magnificent teams heretofore driven in by the stock raisers and graziers of western New York, and as shown at Auburn, Rochester, and Buffalo. But they were good, according to their numbers, and sufficed to convince any one, who needs convincing at this late day, the decided improvement any breeder has it in his power to engraft upon his unimproved herds. A few choice cows were shown by L. G. Morris, of Westchester, a cross of the shorthorns and Dutch cows. These are famous milkers, as described in another article in our present number, and deservedly received some of the best premiums.

Fat Bullocks.—Some immense specimens of these were on the ground, and though few comparatively in this class were exhibited, they were mostly good animals. But we saw none that possessed much merit, that did not apparently derive their principal excellence from some of the improved breeds.

Sheep.—In one respect, the exhibition in this department far excelled anything ever before offered. The distinguishing peculiarity consisted in the numerous splendid specimens of the French Merinos, recently imported by Mr. Taintor, of Hartford, and now owned by the Messrs. Bingham, of Vermont. There were about fifty in all, as we estimated, mostly grown ewes and lambs; and with their massive fleeces, shearing from six to sixteen pounds each, covering carcasses of great size and perfection, they seemed to embody the perfection of the medium-wooled species. Large prices have been paid for such of these as the owners could be induced to sell, and we trust this importation will be the means of extensive improvement in this valuable race. There was, in addition to these, tolerably full representations from other flocks of Merinos, Saxons, Bakewells, and South Downs, many of which were excellent specimens of their respective classes.

After this commendation of these large improved breeds of sheep, we wish it understood, that we do not underrate the value of those of a medium size; on the contrary, we advise all those to retain their present stock, if they possess good constitutions, and are of fine points, at least, till they are prepared with a superabundance of feed, and have in the way of barns and sheds, all necessary accommodation for larger and finer bred animals.

The *Swine* did not exhibit so great an array of numbers, but some of the leading breeds, the Berkshires, Leicesters, and their crosses, showed great excellence in their flesh.

Of *Poultry*, there was a more meagre show than we have ever before seen. Some very pretty specimens of what were labelled Java Bantams, clean-legged, plump-bodied, well-shapen, little bipeds of assorted colors, white, speckled, and grey, made up all there was of interest on the premises, in this department. Some half dozen Bremen geese, and a less number of common-looking dung hill fowls comprised all the balance.

In *Dairy Products* there were several choice specimens, embracing some variety, especially in the style and character of the cheese. But the quantity was not so large as we had expected to witness, in the long-practised and successful English making cheese districts of Oneida, Herkimer, Montgomery, and other neighboring counties.

The Domestic Fabrics—Home-mades.—The handiwork of the farmers' help meets were few and comparatively unimportant. We miss the long files of substantial flannels, the nicely-spun yarns, the huge bundles of soft, woolen socks and mittens, the glowing comforters, tempting almost as the fair hands that knit them, and make one almost wish for a frosty day for the pleasure of wearing, and the daintily-made coverlids—spreads and counterpanes are the modern terms, we believe. Few of all these we saw, and their absence elicited rather melancholy musings, as we thought of the stores of these substantial realities, that make the farmer's home comfortable, healthful, and happy, our good old patriotic revolutionary mothers would have proudly set forth on any similar occasion, had agricultural shows been the fashion sixty years ago. We have changed all this, say the modern belles. Ah! but have you changed it for the better? Machinery has been made to do a large part of this department of women's work, but in mitigating their labors and diminishing their cares, we hope it may not have lessened the stock of those genuine homely virtues, that afford the surest pledge of manly heroism and self-denying, laborious patriotism from the other sex, when these may be demanded. In our next number, however, we shall

give a list of articles exhibited by one old-fashioned matron, just to show what can still be done in the country.

Silk.—We saw no silk, cocoons, raw, sewing, nor manufactured, though a few hanks of these are said to have made their appearance there. Well, we hope our farmers' wives and children are more profitably employed than in rearing the silkworm and manufacturing his web, but we very much doubt if they all are. It is beyond all question, that this branch of our domestic industry will pay those liberally who go into it intelligently and perseveringly. Certain it is, that there is a large amount of comparatively idle population, hanging about our large towns and cities, mostly of foreign pauper emigrants, who might be successfully employed in cultivating the mulberry, rearing the worms, and manufacturing some of the plainest articles from the cocoons. Under intelligent, judicious management, this business might be made to tell, with vast advantage to the industrial wealth of the nation, and the moral and domestic well-being of those concerned in it. An augmenting population is annually thrown upon our shores, much of which is better fitted for this employment than any other. Such are the Protestant Portuguese refugees, some 1,500 of whom have recently come among us, asking employment, that they may earn an honest support. We commend this subject, in all its bearings in a national and patriotic view, to the careful consideration of our statesmen and philanthropists.

Farm Implements were shown in great abundance and of superior quality, though we did not observe anything decidedly new, either in construction or principle. The mechanical has well aided the agricultural interests of this country, by the numerous choice implements it has furnished, combining ease and perfection of working, with strength and durability of material, and finished fully equal to the just wants of the farmer. Success in our agriculture has, perhaps, been more efficiently secured by the introduction of improved implements, than by any other single means; and the farmer who expects success in his operations, without a full supply of all needful tools of the latest and best improvements, may look for disappointment, if not ruin.

There were several specimens of draining tiles, both tubes and oval. The former are made in this country by machines, recently imported from England, and may now be considered within the reach of every American farmer. The advantages of the introduction of *underdrains* are so manifest, wherever they are absolutely required, that any really intelligent man would prefer giving away one half of his highly cultivated clays, to secure thorough underdrainage of the remainder, if he could accomplish it on no better terms.

Other Manufactures were displayed in considerable quantities and variety, and did credit to the artisans by whom they were presented.

Floral Hall was a point of great attraction, containing, as it did, the flowers and fruits, with successive and large delegations of the fair donors and architects of this rural structure, and its attractive furnishings.

Pomological Fruit Convention.—This association commenced its operations in the large market Hall, on Friday, the day succeeding the close of the fair. We noticed only the commencement of its proceedings; but were agreeably disappointed in observing so large a number present, from almost every section of this country and Canada. There was a large assortment of several varieties of choice fruit presented from northern and middle Illinois, showing, conclusively, that industry and enterprise have been busy in that far-off region. Ohio, Pennsylvania, and even Missouri and Canada, furnished fine specimens from their orchards and fruit gardens. The present season, however, has been so unpropitious to the growth and perfection of many species of fruits, that the show was altogether less extensive than last year.

Good fruit and its cultivation are certainly enlisting a liberal share of enlightened public attention, in this country, and we rejoice in recording it. While it is one of our greatest luxuries, and where freely and judiciously used, one of the surest guarantees of health; and so far, at least, as aliment is concerned, it has become an important branch of our productive horticulture. Thousands are now profitably and constantly employed in rearing the choicest fruits for market, while millions devote their leisure in restoring that abundance and perfection, which must have constituted one of the greatest of the physical charms of Eden. The time selected for this convention, seems inappropriate, for this reason; that the fruits exhibited should be as recently gathered as possible; and as most of the delegates leave home to attend the agricultural show, and when from a distance, necessarily have to superintend its selection, packing, and transportation, most of it loses that freshness and character essential to an accurate estimate of its merits.

As utility and permanent, wide-spread information is the object of this convention, we should much prefer that its members have the exclusive investigation of the specimens brought forward, and that they have them, too, in full perfection. For the distant view which spectators are required to take of the state specimens, a good assortment of such fruits as any well-cultivated neighborhood affords, will suffice for that object. We think this department, to which the enterprise of its votaries seems determined to do full justice, at the annual gatherings, should be made distinct hereafter. Let the fruit amateurs take it exclusively in hand, and bestow the premiums that may be offered by the parent society, through their own officers, and under their own organization. Justice will be thus better secured, and the public will have more confidence in the awards. The parent society has enough to do with its cattle, sheep, horses, swine, poultry, implements, seeds, crops, essays, and transactions. Let them yield up this part of its duties to those willing and competent to do it justice.

The Address of Professor Johnston was listened to with undivided attention, a notice of which may be found under the head of Editors' Table, at p. 325 of the present number.

HEMP CROP IN MISSOURI.—We learn that the farmers of Platte county, Missouri, have commenced harvesting their hemp, and that it promises more than an average yield.

ARROW ROOT—ITS SOURCES AND CULTIVATION.

THE arrow root of commerce is a species of fecula, chiefly starch, obtained from the roots of the Maranta arundinacea, originally a native of South America, and is believed to be found indigenous at the present time in Florida, and in the vicinity of Vera Cruz. The same term is used, also, from a fecula prepared from the common potato, known by the name of "British arrow root," as well as from the cassava plant, or Brazilian arrow root, (*Jathropha manihot*,) the "tapioca" of commerce, and from the Curcuma angustifolia, known under the name of "East-Indian arrow root." The latter comes in the form of a white powder, somewhat resembling bi-carbonate of soda or Rochelle salts. When pressed between the fingers, it does not crepitate like the arrow root of the West Indies.

The "true sago" of the shops is obtained from tuberous roots of a species of palm, (*Cycas circinalis*,) and very nearly resembles in its composition arrow root or potato starch. A similar substance is also obtained from the wild sago, (*Zamia pumila*,) of Florida, the "coontia" of the Seminoles, which signifies in their language "bread plant." It consists of a small shrub, very closely resembling the habitat of the real sago family, cycas. During the late Seminole war, many of the Indians and others were prevented from perishing with hunger by having recourse to the bread prepared from the large tuberous roots of this plant; and it is stated that the negroes on several plantations, in Florida, save half their allowance by the use of this bread.

ARROW-ROOT PLANT.—FIG. 74.

The arrow-root plant, (*Maranta arundinacea*,) is a perennial, having a thick, fleshy, creeping root, quite full of knots, and having many long, white fibres. Directly from the roots, arise numerous radical, spear-shaped leaves, six or seven inches long and three broad, which are smooth on the upper surface, somewhat hairy underneath, and stand upon slender petioles, or foot stalks. From among these leaves issue several erect, herbaceous stalks, about two feet in height, each dividing, as they ascend, into two or three smaller branches, which terminate by a loose bunch of small white flowers, standing upon peduncles nearly two inches long. At each joint of the culm, or stalk, is a leaf of the same shape as the radical ones, but smaller in size. The flowers are succeeded by three-cornered capsules, each of which encloses a hard, rough seed.

The arrow-root plant requires a light, loamy, fertile soil of good depth. It is propagated by dividing the roots and planting them in drills from twelve to eighteen inches apart. The ground should occasionally be stirred and kept clear of weeds. When a year old, the roots are taken out of the ground, well washed, and either grated, or beaten into a pulp in mortars of wood. In this state, the pulp is put into clear water and intimately mixed with the fluid by stirring. The farinaceous parts are thus washed off into the water, while the fibrous portions are separated, collected together, and deprived of their moisture by squeezing, and then thrown aside. The white, turbid fluid, which remains, after being strained through a hair seive, in order to free it entirely from all fibrous particles, is left to subside. The supernatant liquor is then drawn off, leaving the starchy matter at the bottom, in the form of a paste. Fresh water is again added to the mass, and the mixture left to settle, after which, the upper portion of the fluid is drawn off as before. Whenever a very fine article is desired, this operation is repeated for the third time. When thus prepared, the paste is exposed on boards or cloths to the rays of the sun, and there left until thoroughly dry. It is then put up in boxes or casks and is ready for sale or use.

The principal part of the arrow root of commerce is grown at Bermuda, the Bahama Islands, St. Vincent, Jamaica, and St. Kitts. How far its cultivation may be rendered profitable in the southern states of the Union, experiment alone can determine. It certainly is worthy of trial.

GRAFTING—FRUIT CULTURE IN MISSISSIPPI.

I SEND you the following plan for grafting fruit trees, which I consider the best I ever heard of. I learned it of the Rev. A. B. Lawrence, now of Liberty, Miss. It is very easy as well as simple, and can be performed at any time that the bark will separate easily from the wood. I have known trees grafted in October.

In the first place, you are to have a parcel of young trees for stocks, about the size of the finger; then procure the grafts of bearing trees, of the present year's growth of wood. The terminal buds, or ends of the limbs, that have ceased growing, in length, are the best; but those that have double buds are good. If you have to carry them any distance, wrap them in wet paper and keep them moist until grafted. Cut the limb containing the buds three or four inches long; then, with a sharp knife, slope the end of the graft on one side; make a cut on the stock in the shape of the letter T; raise the bark, and stick the graft in between the bark and wood; apply a little tallow and beeswax to keep out water and air; wrap it with a strip of cloth or bark, and if done well, three fourths of them will grow finely. In three or four weeks, you

can tell whether they will grow, and if they seem to be doing well, cut off the stock above the graft, and there will be no more trouble but to keep them well trimmed. It is a very efficient and simple method, and any one who tries it will be pleased.

I have been giving attention to fruit culture for eight years, and have quite a variety of apples, pears, and peaches. I find the Bartlett pear to be the very best I have, a very healthy and vigorous growth, bears early and seems to be free from all disease. Finer fruit than I have at this time on a small tree you could not find anywhere. I have examined fruit in the markets of all the northern cities, and never saw better. The apples that do best here are all the June varieties, the horse apple, maiden's blush, Bevan apple, fall pippin, and I have one called the Davis apple, purchased at Hatch & Co.'s nursery, Vicksburg, that is fine, ripening very late, and will keep through the winter.

Last spring, I applied lime and ashes around all my apple trees. By the application of a plenty of these, with proper care, we can have fine fruit.

Perhaps it is not known by many of the readers of the Agriculturist, that nearly all seedling pear trees that have thorns on the limbs are barren and will not produce fruit. E. J. CAPELL.

Centreville, Miss., July 23d, 1849.

IMPROVING LIGHT SOILS.

SINCE the time, when in company with yourself and other invited guests, I went on an agricultural excursion over that part of Long Island contiguous to the railroad, I have often thought of the most speedy and economical mode for the cultivation of the vast number of acres that now lie there in a barren and neglected state. At the time, I was very well satisfied, in my own mind, that much, at least, of these lands might be made available; and the opportunities of seeing the successful efforts of others, with what I have done myself in improving light soils, has confirmed me in the opinion, that they could be made available, and where, now, there is little or nothing of value growing, good crops could be produced.

The question arises, what is the cause of the barrenness of these lands? The prevailing opinion is, that they are destitute of the elements of fertility, that they require an abundant supply of manure, and that they are so leechy that they retain manure but a very short time. Chemical analysis does not point out that they are entirely destitute of nourishment for plants, but that they contain many substances which are found in productive soils. In fact, the lands are so similar in quality to the soil found in many sections, acknowledged to be tolerably fair, that we ought, perhaps, to look for other reasons than the absence of some particular elements.

In the neighborhood of Poughkeepsie, I have seen what I often observed in the city of New York, when cellars and sewers were dug, and where streets were opened, that in making perpendicular cuts in the soil, of greater or less depth, you could have an excellent opportunity for examining the formations of the different strata of earth. On my own farm, where I can raise two good crops of garden vegetables in a year, and any other crop in its perfection, and in several other places, I have had the opportunity of seeing, where the earth was removed in some instances to the depth of twenty feet or more, that the strata were first composed of several inches of surface soil, next yellow, sandy loam, and then layers of sand or gravel for the whole depth removed. Why is it that such lands as these are not considered barren? Why do they retain their fertility for years, merely receiving the droppings of the cattle when pastured, with no other manure except the sod which is turned under in the course of the rotation, and occasionally by a dressing of plaster? In every instance where I have examined such soils, the subsoil was found to be dense and compact; while other land examined, where the subsoil was light, loose, and shelving, it was very poor in quality, and much inclined to gully and wash.

The plan which I have thought would answer for the first object is, to plow the ground early in the spring, when it is moist; when one furrow is turned, then, with a heavy roller, with a flange on it wide and deep enough for the purpose, the subsoil could be compressed in that furrow. If marl, clay, swamp muck, or any stiff soil could be previously deposited in the furrow, it would be a great benefit to apply it. After this, another furrow could be turned over the first, and so continued until the whole field is tilled. Many advantages, it appears to me, would arise from this course. It would be directly the reverse of subsoiling. It would give a subsoil where it imperfectly exists, while in subsoiling you break up one too tenacious. If the land leeches the manure, you would thus partially prevent it. If it loses it by capillary attraction, you diminish the rapid passage of the moisture and gases by increasing the density of the subsoil. While some lands have been permanently injured by the subsoil plow, these would be as permanently improved; for it would perhaps only require one operation, as the pressed soil would be below the reach of the plow, and its action upon it would render the subsoil rather harder than otherwise, whenever subsequently plowed.

The covering of the surface is a system practised with the best effects. Merely scattering over the soil with straw will often cause a luxuriant growth of clover on dry, sandy, and gravelly side hills and knolls. I have cut, this year, fine clover and Timothy grass from a part of my farm where nothing but mullens and light grass grew for years, and several attempts for seeding down were unsuccessful. I attribute the advantages in a great measure to raising a crop of peas on the ground most exposed. After the field was prepared by proper cultivation, I thought it would be a good plan to sow it broadcast very early in the season. To insure the early and perfect vegetation of the peas, they might be soaked a few hours in a solution of guano, and then rolled in plaster previous to sowing. After they are sowed, a liberal quantity of guano should be applied, and then, the ground harrowed and rolled. When the peas come to proper perfection, they might be fed off by hogs, after which the land should be immediately plowed and the remnants of the vines turned under, and the

field sowed with buckwheat, which might also be turned under, seeding down the field with rye.

It strikes me that this would be a reasonable mode of reclaiming these lands; for the soil in a cheap way would be improved physically, and it would have added to it almost two crops of vegetable matter, which I believe it most wants—and it would have the benefit of having been completely sheltered during the whole season, which I think, also, is one of the greatest advantages to successful tillage; for, in their exposed situation, the sun dries up almost all the vegetation, and therefore there is a want of the vegetable matter found in good, productive soils.

This system would be, of course, primary to subsequent good tillage by the best rotation of crops, and the liberal use of fish, sea weed, and other manures which are to be obtained in abundance in the vicinity. HENRY A. FIELD.

Poughkeepsie, N. Y., August, 1849.

ANIMAL CHARCOAL AS A MANURE.

FARMERS should be continually reminded of the great advantage which a large city offers to them in the means of supplying manure. For instance, the refuse of manufactories, in most cases, is capable of being converted into some compost fitted by slight additions of saline substances, to become the most suitable fertilizer to growing crops.

Bone dust and bones, in every shape, now occupy a high and undisputed position in the list of artificial manures, and any mode of obtaining them readier and cheaper than by the purchase of the fresh article, is a boon to the agriculturist; and this, a large city like New York most abundantly supplies.

The refuse animal charcoal left after sugar refining may be used as a substitute in many instances with even more utility than bone dust itself. This refuse does not appear to have always a constant composition, but varies slightly when obtained from different establishments. This is due to the adoption of different modes of manufacture. The charcoal, in some cases, is only used in one operation of refining, while in others it is burnt a second, and even a third time, carrying on two or three refinings before it is rejected as refuse. This, of course, alters the composition to a small extent. Animal charcoal, when freshly made by burning bones in close vessels, whereby a greater proportion of the animal matter of the bones is driven off, consists of the earthy part of the bones, and about 10 per cent. of carbon.

I have lately had an opportunity of examining two specimens sent for analysis to the laboratory of the American Agricultural Association, the composition of which was as follows:—

	No. I.	No. II.
Charcoal, ...	34.00	12
Phosphate and carbonate of lime and magnesia, . .	62.25	65
Sugar and organic coloring matter with isinglass, .	2.35	10
Water, ...	1.40	13
	100.00	100

No. I. would appear to have been used frequently by the large amount of charcoal in it, the quantity of carbon which burnt bones alone would possess being not above that in No. II. Hence, it is likely it was obtained by the burning of the sugar and coloring matters obtained by a previous refining. From this abundance of charcoal, it would form a more valuable compost than No. II., but it has less of the sugar and coloring matters, which, by their ready decomposition, warm the ground. In this respect No. II. excels. The quantity of bone earth in both are almost alike, and exceed the quantity in the same weight of bone dust or guano; so that, when these manures are used for the sake of phosphate of lime, the charcoal is preferable as containing them more abundantly. No. II. also contains an unusually large quantity of water. Taken as a whole, I believe it more nearly represents the average constitution of refuse animal charcoal. I think it would make a valuable manure for pear trees and orchards generally.

THOMAS ANTISELL, Chemist to A. A. A.,
187 Grand st., N. Y.

THE COW—HER DISEASES AND MANAGEMENT.—No. 17.

Staggers, or Dizziness.—The cause of this disorder is a general affection of the brain, particularly showing itself in the state of the optic nerves. As its name imports, it manifests itself in dizziness of the head, causing a waving and staggering motion of the body, by which it is chiefly distinguished.

In the treatment of this malady, bleeding should be performed as soon as the symptoms are perceived, to the extent of three pints, if the cow is in good condition, and one half the quantity if she be poor. Her bowels should then be cleared out by a saline purge, say three fourths of a pound of Epsom salts, immediately after which the following anti-spasmodic should be given, at one dose, in a pint and a half of horse-radish tea:—

Valerian, ¾ oz.; assafœtida, ¾ drachm; nitre, (saltpetre,) 1½ oz.; camphor, 1½ drachms.

This dose may be repeated once every twenty-four hours, until the symptoms subside.

The regimen of the animal, during her illness, should consist of thin diluent drinks, such as water gruel, mashes of barley or Indian meal. Great care should also be observed that she does not expose herself to the extremes of moisture, heat, and cold.

Lethargy, or Sleeping Fever.—The animal, in this disease, is inclined to continued dozing, or sleep, even in a standing posture, by resting her nose on the manger, or crib, being constantly in danger of falling, apparently from dizziness. This evidently shows an oppression on the brain, and a fullness of the head, the blood vessels of which are unable to expel their contents, or carry on the circulation sufficiently active. The chief point, then, is to remove the existing accumulation, or oppression, the cause of the disease, and then to give vigor to the system, in order to prevent its recurrence.

Moderate bleeding will afford almost immediate relief, which should be followed, as in the "staggers," just described, by the same attention to the opening of the bowels. These steps being premised, anti-spasmodics will then complete the cure.

Hence, the same medicine, followed by a similar regimen, and administered as in the last-named disease, will be all that is required.

Asthma, or Short Breathing.—This is a disease peculiar to cows which are fed on grain. The cause, as shown by dissection, consists in a preternatural growth at the top of the windpipe and lungs. This growth, when cut out, has been known to weigh upwards of a pound.

The symptoms of this disorder are manifested by a wheezing and difficult respiration, when the stomach is full, or when the animal is any way hurried. It is a disease that seldom affects her general health, as she will live for several years under it, and even get fat; though she is liable to drop off suddenly in the end, particularly if a cold or inflammation attack the lungs.

From the nature of this disease, it is evident no cure can be expected; but relief may always be given, by occasional bleedings and purging, whenever the animal gets in high condition, or the stomach is overloaded, in consequence of which the malady becomes worse.

Blindness.—The cause of this disorder arises from overdriving, and is therefore connected with inflammation and a fullness of the vessels of the head. No alteration in the eye of the animal is conspicuous, by which the particular affection can be known, except that it is somewhat inflamed and she is deprived of sight. Along with these symptoms, however, there prevails some degree of general fever, and the cow at the same time appears stupid and dull. Where the disease continues for much length of time, a total blindness almost invariably ensues.

In the treatment of this disease, bleeding from the jugular vein is thought to be best, to the extent of two or three quarts, if the cow is in good condition. After this, the following purge should be mixed into a powder, and administered in three pints of water gruel to which half a pint of molasses has been added:—

Epsom salts, ¾ lb.; saltpetre, 1½ oz.; camphor, 3 drachms; coriander and cumin seeds, each, ¾ oz.

In order to complete the cure, alternate medicines should be given after the above, like the following, which have been attended with success:—

Sulphur, from 9 oz. to 1 lb.; grains of Paradise, 3 drachms; saltpetre, 1½ oz.; tumeric and cumin seeds, each, ¾ oz.

To be mixed together and given milk warm, at one dose, in three pints of water gruel, and half a pint of molasses. This medicine generally operates briskly, sometimes continuing for ten or twelve hours. After its operation is over, the following combination will be proper, mixed together and given at one dose, in three pints of good ale or strong beer, with the addition of a handful of chopped rue:—

Flour of sulphur, 3 oz.; saltpetre, 1½ oz.; grains of Paradise, 3 drachms; valerian, ¾ oz.; cumin seed, ¾ oz.; anise seed, ¾ oz.; gentian, ¾ oz.

This mixture may be repeated every day till recovery takes place, which seldom requires more than five or six doses.

The regimen of the cow should be the same as in other inflammations; that is, a plenty of diluent drinks, as water gruel, and mashes of barley and Indian meal, which should be given warm, in order to assist the operation of the medicines.

FRENCH NATIONAL EXHIBITION OF INDUSTRIAL PRODUCTIONS.

Before considering the present show of the products of agriculture and industry, it may not be amiss to see what France has heretofore done for her agriculturists and manufacturers.

The first society of agriculture established in France went into operation in the reign of Louis XV. This society, however, was confined, if not to Paris, at least to the department of the Seine. It was Louis XVI., who, upon the report of one of his ministers, Baron Brenteuil, on the labors of this first society, instituted a central society for all France. The decree to this effect was issued in March, 1788. The society continued to work earnestly for the good of agriculture till the disastrous revolutionary period of '93 arrived, when all institutions, academies, and learned societies were suppressed without any distinction or reserve.

In 1798, the society was reorganized by those of its ancient members whom the political hurricane of those times had left standing. It has awarded, each year from that date, premiums and medals to those breeders and mechanics who have distinguished themselves by their skill or good success in their particular calling. The Revolution of 1848 found the society in a flourishing condition; but it seemed to languish at the sound of the drum, beating to arms, and the hoarse shouting of the intoxicated crowd, and a discontinuance was at one time feared. But thus far, the republic has shown itself the munificent patron of agriculture and industry.

The present *exposition des produits de l' industrie nationale*, or show of the productions of national industry, is said to be something which France has never before seen; and something which, at one time, the most sanguine did not expect. A very large and substantial building has been erected on the square, (Carré des Jeux,) of the *Champs Elysées*, on the left of the grand avenue leading from the *Place de la Concorde* to the triumphal *Arc de l' Etoile*. The show of animals is not large. Two suits of stalls only, running the width of the building, have been provided; but these are 100 in number, wide and spacious, each furnished with a rack and manger. There are several pens, however, for sheep, and in the yard, several more for swine.

The show of animals, I said, is not very large. We have some Durhams, one or two pretty good ones, from the national agricultural institution of Greignon, several Devons, showing excellent points and purity of blood, and two or three fat Herefords, from the same institution. Much attention is daily attracted by a large, coarse, white ox, said to be of the Durham breed, three and a half years old, and weighing over 2,500 lbs. In an adjoining stall, is a small, black and white Brittany cow, six years old, weighing, as she stands, I am sure not over 600 lbs. But better qualities for milk, and more delicacy of limb and proportion, I think I never saw. Any person engaged in the dairy business must notice four Flemish cows, possessing good-sized frames, small limbs, and delicate, clear

skins, and giving unmistakable evidences of their propensity to "run to milk." They are of a dark-red color, with some white on the face, and short, crumpled horns. There are several fine horses in the fair, mostly of the Normandy breed; the one, as far as I have seen, pretty generally in use for heavy draught throughout France. They combine with strength a certain amount of speed. The diligences are principally drawn by them at the rate of six or seven miles per hour, including stoppages. They are heavy, snug-built animals, true in the harness, and never refuse to draw. I have seen one of them attached to a heavily-loaded cart, pull against a gall on his shoulder, nearly as large as my hand, six times, coming down on his knees to the smooth pavement nearly every time. The seventh time, when another horse had been put forward, he pulled his best, as if nothing had happened. Put these horses to their speed, and they get over the ground remarkably well, and without much ado either. The horses are almost invariably kept stallions. I cannot say, however, that I like the collar with which the French work their cart horses. It is a tremendous thing, rigged off with lettered sign boards, bells, and a large sheep skin, with the wool colored blue, the whole large enough for a dozen. It weighs from 20 to 50 lbs.

The show of swine, though small, is very good. Here again the institution of Griegnon is represented. It has sent in some profitable pigs, I make no doubt, which it has styled "Berkshire-Chinese;" large, white pigs, with small-boned legs and prick ears. We have, besides, several of the Chinese breed, decidedly the nicest-looking pigs I ever saw. They are very much, in shape and size, like a breed of black hogs, called Chinese, or grass breed, common in some parts of America, but from their color and appearance of thriftiness, I think they would meet with better success there, both with breeders and pork raisers. Their pork, I understand, is very tender and sweet, and commands a much higher price in the market than that of a larger size and heavier bone. As the hogs are white, the looks of the pork is not injured by that peculiarity which attaches itself to black hogs. The Berkshires claimed as full-blooded, are large and coarse, and one of them is white—a color which, I believe, is not peculiar to that breed. The French, as far as I have seen, are not very great pork eaters nor raisers; and consequently they cannot be expected to carry swine breeding to that extent to which it is carried in other countries where pork fattening is more of a business.

The display of sheep is rich in Merinos and crosses with Merinos. There are two pens of ewes from the national establishment of Rambouillet, that are very fine. I think I never saw such fine carcasses combined with such heavy and valuable fleeces. The wool, however, is not so fine in fibre as I could have expected—not so fine as I have seen at home; but with such thick, heavy fleeces, such hardy, sound constitutions, with face and legs so well covered with wool, we cannot expect the fineness of the Saxony fleece. M. Guynot, of Donarrière, near Rambouillet, has some ram lambs, six and a half months old, at the show, which are nearly as heavy as our full-grown ones. They also unite a fine carcass to a heavy fleece. The institution of Greignon has sent up several half and quarter bloods; but, of course, such crosses, with us, will not bear mentioning when Rambouillet can be brought into the question.

For the credit of France, I would leave unnoticed and undescribed its implements of agriculture. It is strange, but it is nevertheless true, that the French appear to have no ingenuity—I may say taste—for this branch of manufacture. They can make beautiful optical and mathematical instruments; beautiful apparatus for the illustration of anatomical, chemical, and philosophical experiments; but in implements of agriculture and husbandry, they are entirely behind the age. There is quite a variety of plows here, but not one which an American farmer would use, when he could get the poorest even made in his own country. But these French plows appear to work well, because they are generally drawn by from three to six heavy horses through a mellow soil. They are mostly short, clumsy, wrought-iron, and now and then, half-wooden things. In the eastern part of France, towards ancient Alsacia, I have seen farmers plowing on a side hill, with perhaps a pair of horses, a pair of cows, and a bull and heifer, or donkey, yoked together, for a team. Their plows are no less singular and antique than their teams. They consist of an iron frame with a wooden moldboard, attached in a very ingenious manner, without doubt. At the end of each furrow, the board is taken quite off and put upon the other side, in order to turn the sod the contrary way. The operation is always attended with more or less difficulty, as the long line of horses, cows, and mules must be stopped a short time at every turn. This is the only side-hill plow I have seen in operation from one end of France to the other. There are two side-hill plows at the show, or at least plows arranged for turning furrows to the right or left, at will, but which, from their extreme unwieldiness and length of bottom, must be entirely impracticable for any but smooth, even ground. I might describe several shovel harrows, seed sowers, as well as hay and vegetable cutters, but they would only amuse you by their singularity.

In my rambles through France, I have thought I was only passing through the most uncouth and unenlightened parts. I everywhere saw men, and women, too, for that matter, at work with wooden shovels, such as anybody with an axe and knife could make from a plank, an inch and a half thick, heavy, wrought-iron hoes, with short, thick handles, and enormous wooden hay forks, with natural crotches of trees serving for tines, and short, broad, droll-looking scythes, with snathes perfectly straight. But I see these same implements at the exhibition, and I conclude from it that they are the best the country affords.

No one, I think, will refuse to admit that France possesses all the requisite elements for making one of the first agricultural countries on the globe. All it wants is something to turn public attention from its ancient, and unfortunately, from present indications, still-existing hobby of war, to agriculture. The arts of war have been cultivated and carried almost to perfection, at the expense of the arts and of agriculture. We have only to open our eyes to

be convinced of this. In the shops of Paris, we see a hundred, yea, a thousand swords for sale to one scythe—a thousand bayonetted muskets to one sickle—a thousand steel breast plates and helmets to one steel shovel or hoe. Now, turn all the ingenuity and skill employed in the invention and manufacture of these implements of war, to the invention and manufacture of implements of agriculture and husbandry, and we would see plows, harrows, scythes, and sickles equal to any in the world. The elements, I repeat, are not wanting.

But what is applicable to agriculture is not applicable to the sciences and manufactures, particularly those of fancy articles, or *fantaisies*, as they are called. Here the French excel, if at all. At least, one is constrained to think so, after walking through the immense halls of the exhibition palace. A description of the articles to be seen there would be entirely too long for any journal. A list of the names and addresses of the persons admitted to show these articles alone, fills a volume. Now, when we remember that some men have on exhibition a sample or specimen of every article grown or manufactured by them, we may form some idea of the extent of the exhibition. Everything is shown us desirable or imaginable for the kitchen, the parlor, the *boudoir*, the bed chamber—from the patented cooking stove to the finely-sculptured marble mantel piece; from the child's rattle to the rich-toned and highly-finished piano; from the straw-bottomed chair to the elegant mahogany sofa; from the common stone or deal table to the costly marble or rose-wood one. In fact, here is furniture and fancy articles for every taste and every condition.

The silk culture is quite extensively carried on in some parts of France. Thus Lyons silks are known the world over. We have then, as might be expected, the most improved plans adopted for pursuing this interesting and important business; such as shelves on which the worms are fed, reels, looms, &c. In fact, every step, from the rearing of the worms to the manufactured articles themselves, ready for market, handkerchiefs, cravats, silks for ladies' use, and every variety of satin and velvets.

Next is linen and the various forms and uses to which it is put, from the finest lace work, equal to Brussels lace, to table linen and stuff for gentlemen's shirts and pantaloons.

Then there is all sorts and descriptions of cotton goods. Different machinists have brought in almost enough of their work for a large cotton mill. Pickers, jennies, looms, and apparatus for printing and coloring, and such a variety of patterns as would rejoice the eye and heart of every American housewife.

But it is for its woolens, such as broad cloths and cassimeres, that France is particularly celebrated. And the show of these articles does not do discredit to its reputation. I do not say that our American woolen manufactories cannot turn out as good cloths as those of the French; but the French, every one is ready to admit, are peculiarly happy in their dying department. It is no wonder it is so. The government, having always been the encourager and protector of the arts and sciences, is, in a great measure, the cause of this superiority. Does a man make a discovery, or even, in some cases, think he has made one, by which any branch of industry will be benefitted, money is furnished him, that he may institute new researches and experiments, and complete his discovery. Besides this, French chemists rank among the first in the world, and have brought their knowledge of this science to bear upon the art of dying. A course of public and gratuitous lectures, continuing ten months, is every year opened at the manufactory of the Goblins, entirely devoted to this branch of industry. It can be no great subject of wonder, then, that French cloths are noted for their good colors. With a large number of our manufacturers, this is the only difficulty; and I cannot but express my opinion that it would be greatly to their advantage to send some intelligent person, who is already acquainted with the elements, at least, of chemistry, and the French language, perhaps, to this country, to attend this course of lectures, with several more on chemistry applied to the arts, also public and gratuitous. His field of study, of course, would not be confined to these lectures. I ask pardon, it is all I do ask, for this suggestion, but must insist upon its practicability.

The city of Roubaix is represented at the exhibition by more than sixty manufacturers. You may imagine some good cloths are shown. The mills of Roubaix, however, are not confined to the manufacture of woolen cloths. They are for every variety of woolen goods, from shawls to pilot cloths. The single department du Nord, bounded north by the channel and Belgium, employs over 20,000 workmen in this branch of manufacture.

Time fails me, or I could go on indefinitely in the enumeration of articles. I will, however, write down a few from my note book. Glass work, from the most delicate wine glasses up to immense revolving light houses and mirrors, ten by fourteen feet square; all sorts of iron and iron work—furnaces and forges, steam engines, fountains, pumps, and fire engines; india-rubber work; boots and shoes (no pegged ones, though); paper, blank books, binding, &c.; soap and perfumes of every kind and quality; instruments for every purpose—surgery, optics, physics, mathematics, Daguerreotypes, &c., &c.; jewelry of all qualities and at all prices; gold and silver watches; clocks for houses and church towers; plate, pure silver and silver gilt; fowling pieces, rifles, muskets, pistols, cannons, and swords; earthenware and porcelain, some most beautiful from the manufactory of Sevres; carpets, tapestry, and paper hangings; and a great many more things too numerous to mention. The number of competitors is generally very great. It is a question now to continue the exhibition to the 15th of September. To examine everything as it deserves would almost require that length of time, though "the game might not pay for the candle."

Paris, July 30th, 1849. EGREC.

We are much obliged to our correspondent for the above interesting article on French agriculture and manufactures, and if these lines meet his eye, we beg to assure him we shall be happy to hear from him again.

IMPLEMENTS FOR DRAINING.

We give cuts of the various implements used in England in draining, as given by Mr. Colman in his European Agriculture, believing that it may prove useful to those who may engage in the work.

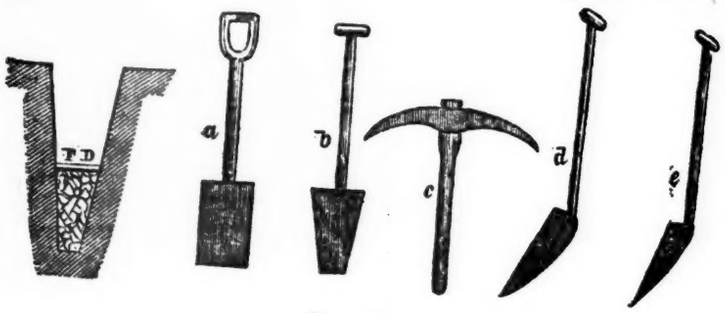


Fig. 75.

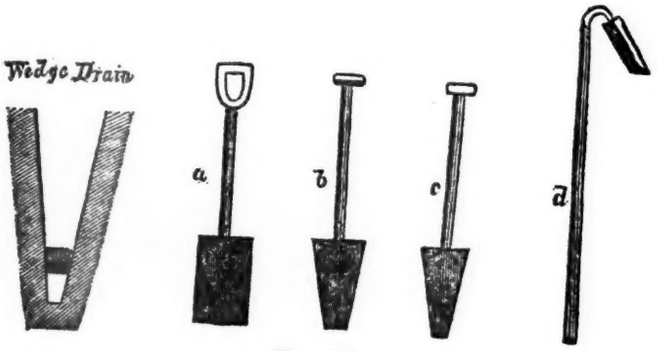


Fig. 76.

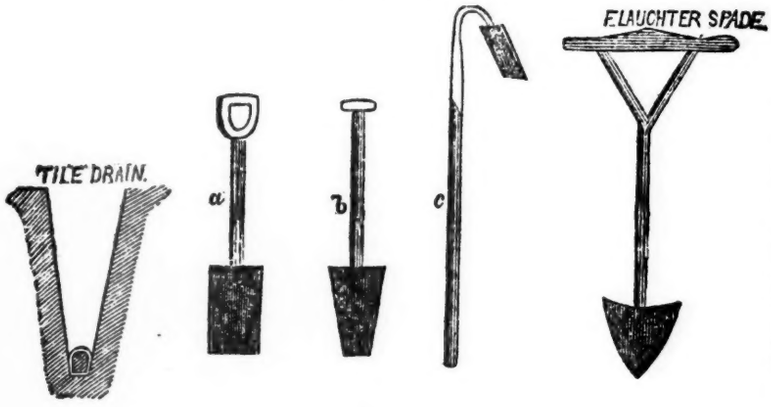


Fig. 77.

Fig. 75. Section of the frequent drain, with its fittings of broken stones and its set; *a*, first spade, common shape; *b*, second spade, which follows the first, and is narrower; *c*, pick used when the subsoil is stony; *d*, large scoop shovel, for removing the loose earth after picking; F D, transverse section of drain.

Fig 76. Section of the wedge drain, with its set, as used in the carse or clay soil; *a*, first or opening spade; *b*, second spade; *c*, third or narrowest spade; *d*, narrow scoop for cleaning out the bottom.

Fig. 77. Section of the tile drain, with its set. *a*, first spade; *b*, second do.; *c*, a flat scoop, with turned-up edge, for cleaning out the bottom.

The Flauchter spade is used for cutting turf to cover the small stones in the frequent drain.

REMARKS ON DRAINING.

We all well know that wheat and other grains as well as grasses, are never fully developed, nor produce good seed, when the roots are soaked in moisture. No man ever raised good wheat from a wet or moist *subsoil*. Now many farms of this country, though at times during the summer they *appear* dry, and crack open on the surface, are not in fact dry farms. On the contrary, for nine months out of twelve, they are moist or wet; and we need no better evidence of the fact, than the annual freezing out of the plant, and consequent poverty of many crops. Need we say more to convince you of the necessity for draining your farms?

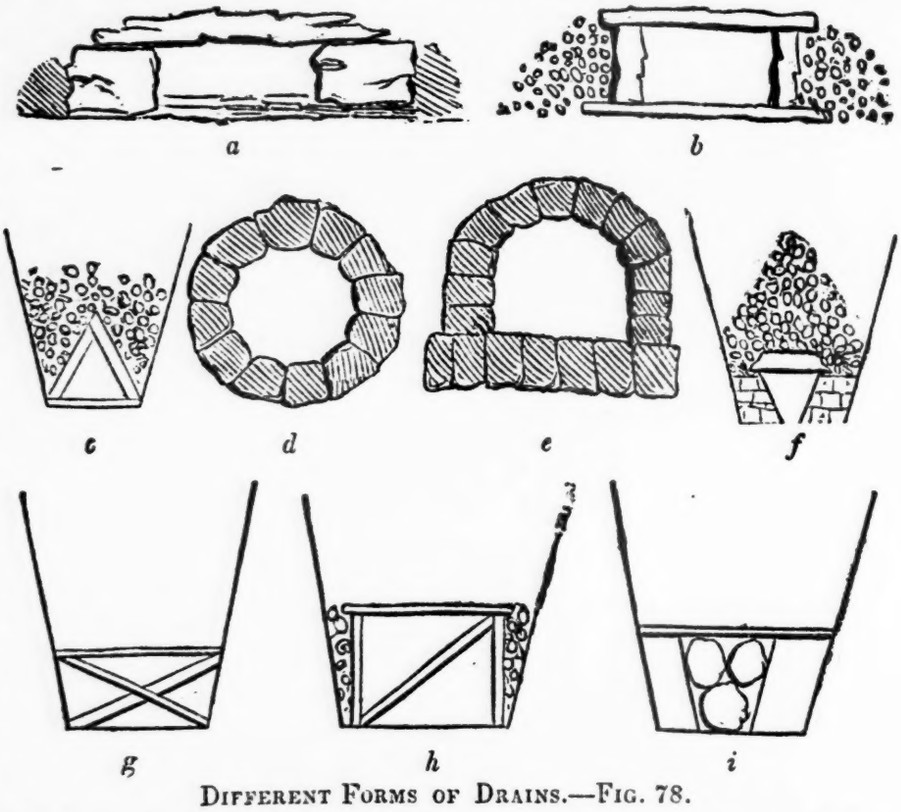
Now comes the question, how is this great good to be accomplished? What is the best method? What will it cost? And above all, what will it pay? These inquiries we will endeavor to meet. The statements, through brief, will doubtless lead you to renewed inquiries and an active search for information.

The inquiry, how is this great good to be accomplished? What is the best method? will lead me to speak of various probable localities, each of which needs a different treatment. Thus we have in several of our towns, portions that may be called *bogs*, being generally too wet to sustain the weight of a man, and where the water seems to rise from below. These lands are very retentive of moisture, acting like a sponge, but when drained are often found to be very fertile and productive. To drain lands of this description, the first important step is, to ascertain the nature of the strata of earth, which *the nearest* high grounds may possess, in order to know whether the main supply of water does or does not flow from them. In almost all cases such is the case, and leads us at once to cut a drain, or ditch, *just above the level* of the bog on the higher ground, and so deep as to intercept the waters as they descend, and by means of this ditch to lead them off towards the lowest point, thus arresting the supply of water, collecting it into one channel, and cutting it off from its usual ramifications through the bog. In time, the bog will have become so firm as to be traversed readily, though it remains wet and marshy. Smaller open drains, or ditches, should now be dug from the lowest point of the bog, to be connected with the deeper and larger ditch on the higher ground, the connection to be made at the greatest depression of the latter. Smaller lateral ditches may now be cut, leading into the main, and thus the bog will be drained and rendered fit for cultivation.

This process as regards bogs is quite simple and easy, unless it is connected with navigable streams

or lakes, or with an ebb and flow of tides, then the work is of too great magnitude for the care or attention of the farmer. In situations where these bogs may have been drained, every exertion must be used to prevent the filling of the open drains, and to overcome the excess of iron which always exists in such moist places. This is done, as you all probably know, by the application of lime; and when accomplished, the reward is great, in the immense amount of herbage the soil will produce.

To drain fields devoted to grain and meadows, it is important so to locate and construct the drains, as that no plow nor other instrument, when used at their greatest depth, can derange them; and that the drainage may be effected, they must be so graded, as to carry off the water with reasonable rapidity. It will naturally occur to every mind, that in locating a drain, the *lowest point* on the field must be the starting point, and from thence the *main drain* must be carried in as straight a line as practicable along the lowest ground and gradually ascending to the highest, the grade or rise being strictly preserved in the same ratio as to distance. This main drain is usually larger than other drains in the same field, as it is intended to receive the collected waters from other portions; its outlet must also be kept well open, and protected from any and every obstruction. When the main drain is completed, lateral drains may be cut running from any low or wet portion of the field into the main drain. Fields having a uniform slope in one direction, may have all the drains parallel to each other, sending all the water to a main drain, constructed at the lowest headland of the field, and thence flowing to the adjacent lower grounds.



Different Forms of Drains.—Fig. 78.

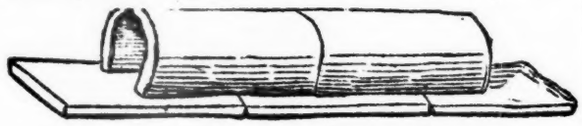
The varied undulations of the ground call for as varied positions of drains; so varied as to forbid suggestions or plans that will suit the wishes of every man; but with the foregoing general remarks, it must be remembered as a general rule that every main drain must be *not less* than *three feet deep;* nor must any other or lateral drain be less than *thirty* inches deep. The width of a drain depends upon the material used for construction, varying from six to twelve inches.

Many and various are the contrivances used in the construction of drains, and as usual, in all projects used *as expedients,* they are faulty, and soon become useless. Among the most approved are the following:—

Drains by masonry are intended for *mains,* but they are too expensive for our farms. The square-stone and the triangular-stone drains are probably the best, where stone of proper dimensions can be procured on the field to be drained. If, however, stone is to be hauled from any distance, then a tile drain, which will be described hereafter, is much the best and cheapest. The other drains as figured, have been used with success, *while they lasted;* but few ever performed their duty beyond two or three years.

When you have judiciously marked out your field to be drained, and staked the course of the several trenches, let them be accurately dug at least three feet deep, and not over thirty feet asunder, for thorough draining. The trenches or ditches must run *down* the slopes, and *not across* them, that the water may go off freely. Dig the trenches as narrow as may be, so that a man can clean out the bottom and construct the drain; the width at bottom for the main drains need not exceed ten inches, and for all other drains not exceed seven inches. Be careful to have the grade, or the fall of the water, not less than one foot in one hundred; remembering that a greater fall will more readily prevent the accumulation of sediment. Cut the main trench first all the way through the field, and do not lay in the materials until you have ascertained that the dimensions and grade are correct throughout. You are now ready to construct the drain *with tiles* of a semi-cylindrical form. These tiles are made of burnt clay, of various lengths, from 12 to 13, 14, and 15 inches, the width and height being 2¼ by 3½ inches, and 4 by 5 inches. When these tiles are well made they are smooth and heavy, and ring when struck with a hard substance. They are so strong that a man may stand or leap on them without breaking them. The drawing now exhibited will explain the form of

this tile, and the manner of laying them in the trench. You will perceive that the tiles are laid upon flat tiles, called soles, and this is brought to your notice, because in this country, drains have been made without any support for the tile, where the bottom has been a hard clay. This practice does well for a few years, but it must be evident, that if the drains ever carry a rapid run of water, the tiles must inevitably sink, more or less, by the wearing of the



FORM OF A DRAINING TILE.—FIG. 79.

bottom, and thus in time destroy the drain. To prevent this mischief, soles are made of convenient widths and lengths on which to set the tiles, taking care to avoid placing the joints in contact, by which arrangement the tile has a firm and uniform bearing. Having your tiles conveniently placed along the trench, they must be laid with due care, first cleansing the trench, so that the soles may lay solid. The tiles being laid, it is best to cover the whole with a turf sod, and fill the trench by means of your plow or shovel, as may be most convenient. Many use straw to cover the tiles, but a turf cut about 18 inches long and 12 inches wide, will just fit and perfectly cover them, with the grass side down. The larger and smaller drains are all thus constructed, and when properly made, will never need repairs, nor further attention.

You must have noticed, that, for thorough draining, the trenches are directed to be dug at distances thirty feet apart; and this is probably the greatest distance at which drains will act so as *to draw* the water from the earth. In this respect we must be guided by the character of the soil, and experience will probably teach us that a distance of forty feet is an extreme limit for *very thorough* draining.

This is the method of draining now so extensively used in other countries, and about to be extensively adopted in our own; and these *tiles* are found to be far superior to masonry, to stone, to wood, or any other kind of drain hitherto tried. It is this system or method which has enabled the farmers of England and Scotland, of late years, to raise twice the number of bushels of wheat from an acre, more than we can do.—*Transactions of N. Y. State Society, for* 1848.

TO DRIVE AWAY RATS AND CROWS.

I PRESUME that many of your readers are troubled with rats in their barns, granaries, corn houses, &c. If they wish to get rid of them, let them procure a lively raccoon, which will not kill them but frighten them away. This is an easier and much better way to get rid of these pests than by poisoning, as then, they retire to their holes to die and create a smell anything but pleasant.

During the spring, the crows were very troublesome on the corn fields. I noticed that they did not meddle with the corn near the woods, but almost always pulled it up in open ground. Consequently, I chopped some brush and made a small booth in a corn field, and then fired off a gun and went to the house. After that, they did not pull up any more corn. All the corn planted in this field was rolled in tar and plaster. The crows would not eat it, but pulled it up to see if it was good.

FRANK.

Oneida Co., N. Y, August 30th, 1849.

INTERESTING EXPERIMENT WITH PERUVIAN GUANO AND OTHER MANURES.

THE following is the result of an experiment to test the comparative efficacy of five different kinds of artificial manure in improving pond mud, the experiment being made on an acre of inferior pasture land, in Stover Park, England, by E. S. Bearne, in the years 1847–8–9.

The land on which the experiment was conducted, is of uniform quality, the soil being a light, sandy loam a few inches in depth, incumbent on a stratum of white clay. It underwent thorough draining in 1844, prior to which, it would not produce a rent of more than 5*s.* an acre. No manures were applied to the land in 1848 nor 1849. The object sought to be attained, by extending the experiment over a period of three years, was to test the *durability* of the different manures.

Manures applied in 1847.	Weight of hay cut in 1847.	Weight of hay cut in 1848.	Weight of hay cut in 1849.	Weight cut per acre in 1847.	Weight cut per acre in 1848.	Weight cut per acre in 1849.
	lbs.	lbs.	lbs.	seams of 3 cwt.	seams of 3 cwt.	seams of 3 cwt.
1. Six cubic yards of mud, mixed with six cwt. of salt—cost of manure 14s.....	312	327	613	4⅛	4¾	9
2. Six cubic yards of mud, mixed with 1½ hogsheads of lime—cost 13s. 6d.....	353	337	538	5¼	5	8
3. Six cubic yards of mud, mixed with three bush. of bone dust—cost 14s. 3d.....	511	419	670	7½	6¼	10
4. Three cubic yards of mud, mixed with three cubic yards of tan-yard refuse—cost 14s..	524	354	558	7¾	5¼	8⅝
5. Six cubic yards of mud, mixed with ninety lbs. of Peruvian guano—cost 14s.....	930	550	725	13¾	8	10¾

N. B.—The after-grass, in 1847, was stocked with sheep, but in 1848, it was left unconsumed.

THE FOOD OF PLANTS.—Most of our cultivated plants and trees derive their support from the earth as well as from the atmosphere. This was long thought to be otherwise, from the circumstance that Van Helmont planted a willow, five pounds in weight, in a pot filled with dry earth, and covered with a perforated sheet of tin. This earth he supplied with rain water. In five years, the willow was increased to 169 lbs. 3 oz. The earth, on being taken out of the pot, at the end of that period, dried, and reweighed, suffered no perceptible loss. Those who contended that the increase of the willow was derived solely from the rain water and the air, did not take into account the liability of dust to fall into the pot through the holes in the tin, nor the amount of mineral matter contained in the rain, with which the tree was watered, both of which, doubtless, contributed to its growth.

A CHINESE SUMMER HOUSE

Although we have but little to say in favor of the wisdom of the Chinese, there is much to admire, as well as to condemn, in that race of men, who, separated as they are from the rest of the world, without any model to assist them, have been able of themselves to mature sciences and invent arts. What is really Chinese, has, at least, the merit of being original.

Moreover, we regard China with some degree of affection, as the great emporium of curious porcelain and as the parent soil of Bohean bowers, yielding that precious beverage, "which cheers, but not inebriates," and which enables us to "drink deep" without the sequent evils—for its gardens with their meandering rivulets, green groves, dwarf-like trees, scattered grass plots, mounds, cavities, laughing flowers, singing birds, sparkling waters, familiar fishes, artificial rock work, and dead trees,

Fig. 80.

stuck into the reluctant soil for the sake of variety. There are some points in its architecture, too, which are both singular and pretty in design, neat in workmanship, and occasionally graced with features of much elegance and picturesqueness, which are worthy of imitation by more polished hands. Such, for instance, is the little octagonal summer house, situate on a pending rock, (fig. 80,) with its trellised sides and canopied roof, overshadowed by trees, and jutting into the sea. There is a refinement about it, a lightsome prettiness, and fitness, which recommend it to the notice of gentlemen of taste, particularly those residing on the Hudson, the Ohio, or any bluff or promontory overhanging the ocean, a river, a valley, or a plain.

Pulse of Various Animals.—The pulse of several of our domestic animals, as given by Vatel in his "Veterinary Pathology," is nearly as follows:—Horse, from 32 to 38 pulsations per minute; ox or cow, 35 to 42; ass, 48 to 54; sheep, 70 to 79; goat, 72 to 76; dog, 90 to 100; cat 110 to 120; rabbit 120; Guinea pig, 140; duck, 136; hen, 140.

THE COTTON CROP—COTTON BLOOMS—EARLY FROSTS.

We extract the following table from the "Charleston Mercury," of the dates of the appearance of the cotton blooms and of the first frosts, by which it would seem that a late spring is almost invariably followed by an early frost:—

Years.	When in Bloom.	First Frost.
1836	4th June	14th Oct.
1837	27th May	27th Oct.
1838	14th June	7th Oct.
1839	24th May	7th Nov.
1840	6th June	17th Oct.
1841	10th June	15th Oct.
1842	17th May	1st Nov.
1843	12th June	15th Oct.
1844	31st May	30th Oct.
1845	30th May	3d Nov.
1846	10th June	1st Nov.
1847	29th May	27th Nov.
1848	1st June	30th Nov.
1849	15th June	

In 1837, it will be seen that the first blooming of cotton was on the 27th of May, and the crop was 1,801,497 bales. In 1839, cotton bloomed on the 24th of May, and the crop was 2,177,835 bales. In 1842, it bloomed on the 17th of May, and the crop was 2,379,460 bales. In 1844, it bloomed on the 31st of May, and the crop was 2,030,409 bales. In 1845, it bloomed on the 30th of May, and the crop was 2,415,488 bales. In 1848, it bloomed on the 1st of June, and the crop, aided by a very late fall, was about 2,700,000 bales. In 1849, it bloomed on the 15th of June, and this, with many other reasons, indicate that the present will be a short crop. In the first place, the cotton was generally up on the 15th of April, when we had snow and sleet, and on three or four following days heavy frosts, which occasioned an almost general destruction of the plant throughout the cotton-growing region. This made it necessary to replant, and thus the crop had a very late start. In the next place, after replanting, there was a drought, which lasted till late in May, and by the time the plant had made its appearance above ground, it had bloomed in the years 1839, '42, '44, '45, and '48. The present crop, therefore, is about three weeks behind.

Interesting Fact in Grafting.—Du Hamel, the celebrated French pomologist and horticulturist, ingrafted a young lemon, of the size of a pea, upon the branch of an orange tree. It grew there, ripened, and had all the qualities of the lemon, without partaking of any of the properties of the orange. It is evident, in this instance, that the stalk of the lemon changed the color, taste, and smell of the juices of the orange tree. And from this experiment, we have reason to conclude, that all the different figures, colors, tastes, and smells, which we find in different plants, are formed in the plants themselves.

A Happy Farmer.—I am a true laborer. I earn that I eat—get what I wear—owe no man hate—envy no man's happiness—glad of other men's good—content with my farm; and the greatest of my pride is to see my ewes graze and my lambs suck.—*Shakspeare.*

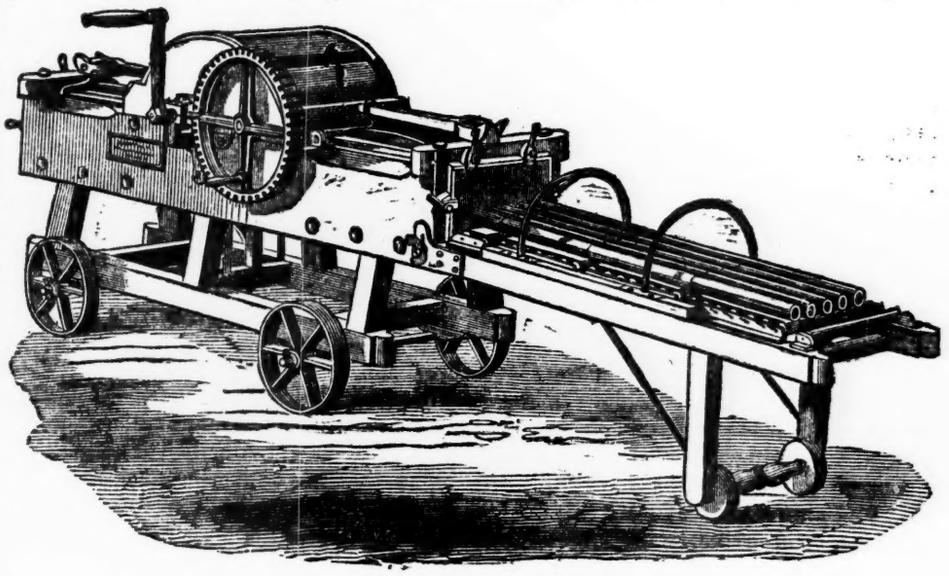
SCRAGG'S TILE MACHINE.

THE president of the Seneca-County Agricultural Society, (John Delafield,) has presented a drawing and description of the improved tile machine recently imported by him, and it comes opportunely to accompany this volume.

This tile machine combines every improvement which has been adopted and sanctioned by the experience of the English and Scotch agriculturists. The process is simple, and rapid, for making the various forms of tiles; the clay needs no other preparation than to turn it out of the pit, exposing it to the air for about sixty days, when it is moistened ready for the machine.

The clay is put into the machine upon screens so constructed as to remove all stones and gravel; it then passes between rollers, giving it a due consistence, and thence is passed through dies of the required shape or form, passing the tile to a receiving table; a cutting form descends and cuts the tiles to a uniform length; they are then removed to drying shelves until ready for the kiln. It is said that twelve thousand tiles may be made in a day, but half that number per diem will furnish a large supply, and probably enough, until the system of draining farms shall be better understood.

This improved tile machine produces drain tiles in the form of a horse shoe, rising 2½ and 4 inches; it makes pipes also for draining, from one inch bore up to six inches diameter, each size varying about half an inch. Soles or flat tiles are made on which to lay the tiles when desired. Semi-cylinders are made of 8 and 11 inches diameter. It also produces with equal readiness, pan tiles for roofing and ridge tiles.



TILE MACHINE.—FIG. 81.

To the present year, draining tiles have cost from twenty to twenty-five dollars per thousand; they will now be offered as low as ten dollars per thousand, and every endeavor will be made by those who work the machine, to afford them at a lower price, if possible, and consistent with a fair remuneration.

The machine was shipped on the 9th of this month, May, from New York, and will reach its destination in Seneca county, so as to be in operation in June. The farmers of that county are entitled to the thanks of the state, for their energy in thus bringing so valuable a machine into operation.—*N. Y. State Transactions, for* 1848.

HE who pulls off his coat cheerfully, strips up his sleeves in earnest, and sings while he works, is the man to have.

HINTS ON THE MANAGEMENT OF HORSES.—No. 6.

THE subject of *riding* is an important point connected with the management of the horse. We subjoin some excellent remarks on this subject from Lawson.

The first time a man is put on horseback, it ought to be upon a very gentle horse. He never should be made to trot till he is quite easy in the walk; nor gallop till he is able to trot properly. The same must be observed in regard to horses; they should never be made to trot till they are obedient, and their mouths are well formed on a walk; nor be made to gallop, till the same be effected on a trot. When he is arrived at such a degree of firmness in his seat, the more he trots, and the more he rides rough horses, the better. This is not only the best method, but also the easiest and shortest; by it a man is soon made sufficiently a horseman for a soldier; but by the other detestable methods that are commonly used, a man, instead of improving, contracts all sorts of bad habits, and rides worse and worse every day; the horse, too, becomes daily more and more unfit for use. In proceeding according to the manner proposed, a man is rendered firm and easy upon the horse, both his own and the horse's sensibility is preserved, and each in a situation fit to receive and practise all lessons effectually.

Mounting.—Every horse should be accustomed to stand still when he is mounted. One would imagine this might readily be granted; yet we see how much the contrary is practised. When a gentleman mounts at the stable, the groom takes the horse by the bit, which he bends tight round under his jaw; the horse striving to go on, is forced back; advancing again, he frets, as he is again stopped short, and hurt by the manner of holding him. The rider, in the meantime, mounting without the bridle, or at least holding it but slightly, is helped to it by the groom, who, being thoroughly employed by the horse's fluttering, has at the same time both bridle and stirrup to give. This confusion would be prevented, if every horse was taught to stand still when he is mounted. Forbid your

groom, therefore, when he rides your horse to water, to throw himself over him from a horse block, and kick him with his leg, even before he is fairly upon him. This wrong manner of mounting is what chiefly teaches your horse the vicious habit against which we are here warning. On the other hand, a constant practice of mounting in the proper manner is all that is necessary to prevent a horse going on till the rider is quite adjusted in the saddle.

The next thing necessary therefore is, that the rider should mount properly. The common method is to stand near the croup, or hinder part of the horse, with the bridle held very long in the right hand. By this manner of holding the bridle before you mount, you are liable to be kicked; and when you are mounted, your horse may go on some time, or play what gambols he pleases before the rein is short enough in your hand to prevent him. It is common likewise for an awkward rider, as soon as his foot is in the stirrup, to throw himself with all his force to gain his seat; which he cannot do, till he has first overbalanced himself on one side or the other; he will then wriggle into it by degrees. The way to mount with ease and safety is, to stand rather before than behind the stirrup. In this posture, take the bridle short, and the mane together in your left hand, helping yourself to the stirrup with your right, so that your toe may not touch the horse in mounting. While your left foot is in the stirrup, move on your right till you face the side of the horse, looking across over the saddle. Then, with your right hand, grasp the hinder part of the saddle; and with that and your left, which holds the mane and the bridle, lift yourself upright on your left foot. Remain thus a mere instant on your stirrup, only so as to divide the action into two motions. While you are in this posture, you have a sure hold with both hands, and are at liberty, either to get safely down, or to throw your leg over and gain your seat. By this deliberate motion, likewise, you avoid, what every good horseman would endeavor to avoid, putting your horse into a flutter.

Dismounting.—When you dismount, hold the bridle and mane together in your left hand, as when you mounted; put your right hand on the pommel of the saddle, to raise yourself; throw your leg back over the horse, grasp the hinder part of the saddle with your right hand, remain a moment on your stirrup, and in every respect dismount as you mounted; only what was your first motion when you mounted, becomes the last in dismounting. Remember not to bend your right knee in dismounting, lest your spur should rub against the horse.

Manner of Holding the Reins.—It may next be recommended to hold your bridle at a convenient length. Sit square, and let not the purchase of the bridle pull forward your shoulder; but keep your body even, as it would be if each hand held a rein. Hold your reins with the whole grasp of your hand, dividing them with your little finger. Let your hand be perpendicular; your thumb will then be uppermost, and placed on the bridle. Bend your wrist a little outward; and when you pull the bridle, raise your hand toward your breast, and the lower part of the palm rather more than the upper. Let the bridle be at such a length in your hand, as, if the horse should stumble, you may be able to raise his head, and support it by the strength of your arms, and the weight of your body thrown backward. If you hold the rein too long, you are subject to fall backwards as your horse rises.

If, knowing your horse perfectly well, you think a tight rein unnecessary, advance your arm a little, (but not your shoulder,) towards the horse's head, and keep your usual length of rein. By this means, you have a check upon your horse while you indulge him.

The Curb.—If you ride with a curb, make it a rule to hook on the chain yourself; the most quiet horse may bring his rider into danger, should the curb hurt him. If, in fixing the curb, you turn the chain to the right, the links will unfold themselves, and then oppose a further turning. Put on the chain loose enough to hang down on the horse's under lip, so that it may not rise and press his jaw, till the reins of the bridle are moderately pulled.

MR. ROBINSON'S TOUR.—No. 10.

Using Bagasse for Manure.—Mr. Lapice, whom my readers will recollect we parted with last month, has found great advantage in using bagasse as manure. He grinds it through a second mill, which makes it dry and fine, and it is then spread directly upon cane stubble, where it is suffered to lie a year, and then plowed in, together with a pea crop which he plants upon the ridges, in May, and from which he derives great advantage not only as a manure, but by the shade, which greatly assists to kill the coco.

Upon Col. Manning's place, five miles below Donaldsonville, Mr. Havvin, his overseer, told me that he manured 75 acres last year, with rotten bagasse, which doubled the crop. Mr. L. and Col. M. both use lime, and pen their cattle upon the bagasse pile to rot it. This does it in two years effectually. Mr. Havvin plants cane seven feet apart, but thinks six feet would be better upon old land so set with coco as this place is, as it sooner shades the ground, which is the most effectual thing to overcome this great pest of the planters. There are 850 arpents in cultivation upon this place. The regular crop is 250 arpents of cane plant; 250 of cotton; 350 of corn; and the working force about 80 full hands, and 40 mules and horses.

Donaldsonville is about 80 miles above New Orleans, and is situated upon the point between the river and bayou La Fourche, which is a fork, as the name implies, or outlet, running out at a right angle, nearly, and is some 250 feet wide at high water, and 25 feet deep; but 60 feet wide and 2 feet deep at low water. The distance to the mouth of the bayou is about 100 miles, while by the river it is double that, and the two mouths are about 50 miles apart.

Burning Bagasse.—Below Donaldsonville, Mr. Ford has a new bagasse chimney, 40 feet high, at a cost of only $80, which he alleges is built upon a new principle; and its cheapness is certainly well worthy the attention of all who are still disposed to practise this method of destroying a valuable article for manure.

Mr. Ford's boiler flue is conducted into the same

chimney, and it is his opinion that with two 60-foot boilers, the burning of the bagasse would make nearly steam enough to grind and boil the crop.

Value of Land on Bayou La Fourche.—Mr. Sherrod Sparks, 14 miles below Donaldsonville, sold his place, last winter, for $20,000, containing 600 arpents, without stock or tools—300 arpents in cultivation, with sugar house and engine and two moderate dwelling houses, with other buildings. The place made 100 hogsheads of sugar last year and 110 the year before, with plenty of corn. The corn on hand sold with the place. The price of an adjoining place is $20,000 for 370 arpents. A general average price of sugar lands is $50 an arpent, including improvements.

Thomas Pugh's Plantation.—This is one of the best in the state. Not the largest, though quite enough so to satisfy any man of moderate desires, as the value of the annual crop is from $30,000 to $40,000. Mr. P. owns here about 3,000 arpents —1,000 cleared, 550 in cane, 250 in corn, and 200 in pasture, yards, gardens, &c. Of the first-named crop, 440 arpents made 700 hogsheads of sugar, and about 60 gallons of molasses to the hogshead. The remainder of the cane was reserved for seed planting. One acre of cane is required to plant five acres. Mr. P. has 100 working hands, producing about seven hogsheads of sugar to each. But this is not all profit, for the annual expenses upon sugar plantations generally, will average about $100 to the hand.

As this amount will appear so enormous to some of my readers, let me give the items upon this place last year:—

Wages of overseer per annum,	$1,200.00
" engineer, tending sawmill and sugar house,	700.00
Average annual outlay for mules,	1,000.00
" " " to keep up supply of plows, carts, wagons, spades, hoes, chains, harness, nails, iron for blacksmith shop, &c.,	1,000.00
Average annual outlay for repairs of engines, mills, and kettles,	200.00
Shoes, (from the bills of 1848,)	475.00
Cotton cloth, for clothing hands,	800.00
Woolen " " " "	444.00
Woolen blankets,	200.00
225 barrels of mess pork, at average of $10,	2,250.00
50 barrels of flour, (one to each family at Christmas,)	225.00
Hoop poles, for sugar and molasses casks,	200.00
Oil for sugar house,	175.00
Physician's bill and medicines, ($1.75 a head,)	350.00
Taxes and other incidental expenses for sundries unenumerated,	200.00
The interest upon the estimated value of the plantation and all upon it, would be, at 8 per cent.,	16,501.20
	$25,920.20

Nothing for family expenses is included in the above estimates.

Mr. Pugh has been upon this place 24 years, and never bought corn but one year. His average yield per acre upon new land is thirty bushels. And that is double the usual average of the state, I think. The quality of his soil is above the average. Next to the bayou it is considerably sandy, but grows more stiff as we go back toward the swamp.

The estimated value of this plantation is as follows:—

1,600 arpents of land, (1,000 cultivated and 600 timber,) at $50,	$80,000
1,400 arpents back lands, (cypress swamp,) cost $1.25,	1,750
The mansion house being a new one is estimated at cost over and above the ordinary value of land,	30,000
201 negroes, at average of $400 each,	80,400
60 farm mules and horses, at average of $100 each,	6,000
6 yoke of oxen, $40 a yoke,	240
Other stock and moveables, say	1,000
16 carts at $50 each, and 1 wagon $75,	875
Plows and other tools, say	2,000
The stock of corn for use in crib, 10,000 bushels at 40 cts.,	4,000
	$206,265

To show that the estimate for clothing and provisions is not too high, I will give the regular allowance to each adult, which is as follows:—4 cotton shirts; 2 cotton pants; 1 cotton jacket; 1 woolen jacket; 1 pair of woolen pants; 1 wool hat; 1 straw hat; 1 blanket; 3 pair of shoes; 2 woolen shirts (to a part only); a calico dress and handkerchief extra to each woman and girl, besides clothing for house servants. All the clothing is cut and made under the superintendence of Mrs. Pugh, who, at least, is one southern woman that "knoweth the way of her own household."

I will now give the feeding rations of this plantation, just to show that these laborers are not starved. Some plantations feed even higher, but the average is a little less. Every name upon the working list draws a peck and a half of good, sweet corn meal a week, and five and a quarter pounds of mess pork, besides vegetables. Then all children are fed separately. Besides, a barrel of molasses is dealt out every week, and a barrel of flour to each family at Christmas. Rations of fresh meat are occasionally given.

Mr. Pugh's overseer is a well-bred Yankee carpenter, by the name of Munson, from New Haven, Connecticut. And I wish here to remark, that I believe there is a rapid improvement going on in the character of this important class of persons to all southern planters. Educated and better men than formerly are employed, very much to the advantage of all concerned.

The buildings on this plantation are well worthy the attention of other planters desiring to make improvements. The mansion is not the most showy, but is one of the most commodious and excellent dwellings in the state. The main building, 60 by 68 feet, is two stories, the wings only one, and yet there are 600,000 bricks in the walls.

Next in importance to the dwelling, and upon nearly all plantations, exceeding it, is the sugar

house. Mr. Pugh's is 40 by 340 feet, with an extensive cane shed at one end, laid with iron rails, for cars to bring up the cane from where the carts drop it, to the cane carrier, which elevates it about fifteen feet to the mill, from which the bagasse falls into carts, and the juice runs to the vats, where it is cleansed by the "Spansenburg process," and thence runs to the kettles; thence to the coolers, and from there the sugar is carried upon railroad cars along lines of rails between the rows of hogsheads to the farther end of the building.

In a country where labor-saving machinery is so rarely seen, the excellent arrangements here are more worthy of attention.

Then, again, at the stable, we find another railroad labor-saving contrivance, that might well be copied by nine hundred and ninety-nine other planters. The stable is 40 by 230 feet, divided into 62 stalls, each seven feet wide. The mules all stand with their heads to the centre passage, seven feet wide, through which a railroad car brings corn and fodder from the corn house annexed at one end, and the animals are fed with a very small amount of labor. Behind the mules, upon each side, there is a good passage way, and each animal soon learns to know his place, where he is fastened by a broad strap around the neck, and a stout chain made fast to the stall so that it is always there. All the feeding is done by one careful hand, who is held responsible that everything appertaining to the stable is as it should be. This is a much better arrangement than trusting every Tom, Dick, and Harry, to feed the animal he has been using; and just a trifle superior to the very common practice of turning horses and mules all together into "the lot," to eat corn and fodder all from one trough, and at the same time keep up a constant fight over it. For it is a truth that many a plantation has not a stable upon it. This is perhaps more the case in Mississippi than in Louisiana. But there are plenty of planters in both states who might profit by a visit to Mr. Thomas Pugh.

REARING AND MANAGEMENT OF POULTRY.—No. 2.

Range and Domestic Accommodation of Poultry.—Whatever number or breed of fowls one may have selected for keeping, provision must be made for their comfort and safety. Those attached to farm houses lead, in many respects, a happy life. They have good air and plenty of room, and generally with no lack of food. They wander about the farm yard, the orchard, and the lawn, visit the adjacent gardens and fields, travel over the pastures, through the highways or lanes, troop around the barn, and enjoy total freedom. To the advantage of pure air, they usually have that of pure water, and the opportunity of varying their diet by picking up insects and their larvæ; and a store of pebbles, gravel, old mortar, and other calcareous matter, which they require, is always at their command. So far, they lead a comfortable and natural life; but how are they housed at night? In many instances, in a proper and well-built poultry house, with perches judiciously arranged, with boxes lined with straw for the laying and sitting hens; but often in places utterly unfitted for them. For instance, numerous flocks of hens will be lodged under the roof of some large, open shed, above the cattle, wagons, or carts, which receive an abundance of their droppings; others take shelter in the barns, stables, cider mill, pig pen, out-houses, &c., while not a few may be found roosting on the branches of some favorite tree. This want of order cannot be too strongly condemned, as hens, having no proper laying places, select such situations as chance may offer them, not unfrequently in obscure places of concealment, so that their eggs are devoured by vermin or are lost.

Those who intend to rear fowls, should have a distinct yard, with a warm aspect, well fenced, secure from vermin and thieves, sufficiently inclined to be always dry, and supplied with gravel, old mortar, (not quick lime,) or chalk, brick dust, and with sand or ashes for the fowls to bask or roll in. If possible, a stream of running water should pass through the yard; but if this cannot be done, a trough filled with fresh water every morning may be substituted. A want of water, of which all kinds of poultry are fond, produces constipation of the bowels and inflammatory diseases. A contiguous field or pasture, however, whenever it can be had, would in all cases be preferred.

A fowl house should be dry, well roofed, and fronting the east or south; and if practicable, in a cold climate, it should be provided with a stove or some other means for heating—warmth being very conducive to health and laying, though extreme heat has the contrary effect. The dormitory, or roost, should be well ventilated by means of two lattice windows, at opposite ends of the building, and it would be desirable to have one or more apertures through the roof for the escape of foul air. The sitting apartment, also, should be well ventilated by means of a large lattice window, in the side of the house, and holes through the ceiling, or roof. If kept moderately dark, it will contribute to the quietude of the hens, and thus favor the process of incubation. The sitting room should be provided with boxes or troughs, well supplied with fresh water and proper food for the hens, during the hatching period, from which they can partake at all times, at will. The laying room, in winter, should have similar boxes or troughs, containing old mortar, broken oyster shells, brick dust, gravel, and ashes, as well as a liberal supply of proper drink and food. The perches, or roosting poles, should be so arranged that one row of fowls should not rest directly above another. They should be so constructed as to enable the fowls to ascend and descend by means of ladders, or steps, without making much use of their wings; for, heavy fowls fly up to their roosts with difficulty, and often injure themselves by descending, as they alight heavily upon the ground.

Where the fowls have the range of an orchard, or a wide, dry, sandy pasture, or field, and are able to procure clean water, a good poultry house is all that is essential, though even then an enclosure, or yard, is desirable for the safety and better management of the young broods. It should be open and airy, its soil dry, and sheltered from cold, wintry winds. A simple shed, moreover, should be erected in some suitable spot, in order to afford a screen to the fowls from the hot rays of the mid-

day sun, in summer, and from heavy rain storms and showers. Should there be no access to a pasture, orchard, or field, it is desirable that a portion of the yard should be laid down with turf, and the larger the yard, the better the accommodation.

Cleanliness, both in the poultry house and in the yard, is indispensable. This, with as free a circulation as possible, and a proper space for the fowls to run in, is necessary to insure success, as in narrow and confined situations they never do so well. A sickly fowl ought to be separated immediately from the rest of the flock, and removed to some proper place, where they can remain in seclusion, not only because the disease may be contagious, but for the sake of safety and quietude of the fowl itself. Meagre, pining fowls are frequently objects of dislike, not only to the cock, which is apt to maltreat them, but even to the hens, that evince their hostility and rancor to such a degree, that, sometimes, they actually destroy their more unfortunate companions.

Every poultry house should be provided with wooden nest boxes, filled with straw. If the plan be adopted, as delineated in fig. 73, at p. 281, of the current volume, sliding nest boxes, or drawers, *n*, *o*, may be constructed twenty-eight inches long, fourteen inches wide, and ten inches deep, partitioned in the middle, so as to leave two compartments in each, fourteen inches square. On a level with the tables, each of which is designed to be two feet wide, and extending three feet above the ground, let there be cut through the partition between the laying and sitting apartments, an aperture the whole length of the rooms, ten inches high, or sufficiently large to receive these nest boxes, or drawers, so that one half of each will be in the laying room, and the other half in the sitting apartment, leaving a space nine or ten inches wide on each table for the hens to alight upon, and deliberately enter their nests, without breaking their eggs. When a hen is disposed to sit, the eggs may be put under her, and one or two nights after, the ends of the nest box may be shifted, so that she will be in the sitting room, where she may remain in perfect quietude till she hatches her brood. It is not at all required to have as many nests as hens, as one might suppose; because they have not all occasion to occupy them at the same time; besides, they are so far from having a repugnance to lay in a common receptacle, that the sight of an egg stimulates them to lay. It is true, nevertheless, that the most secluded and darkened nests are those which the hens prefer, particularly when they are inclined to sit.

To Keep a Stove Bright by Two Applications a Year.—Make a weak alum water, and mix British lustre with it, perhaps two teaspoonfuls to a gill of alum water; let the stove be cold; brush it with the mixture; then take a dry brush and rub it till it is perfectly dry. Should any part, before polishing, become so dry as to look grey, moisten with a wet brush and proceed as before.

Ventilation.—As every adult human being inhales about sixty gallons of air per hour, the necessity of attending to ventilation in close apartments is evident.

IMPORTED CATTLE.

In my communication in the August number of the Agriculturist, I omitted to include the following, as I purposed:—

The cow Waterloo V., is now on the ocean, and will, in September, be in America. She was bred by Thomas Bates, Esq., of Kirkleavington, England, and was got by his crack prize bull, Duke of Northumberland, (1,940,) her dam, Waterloo III., by Norfolk, (2,377,) grandam, Waterloo I., by Waterloo, (2,816,) great grandam, Lady Antrim, by Waterloo, (2,816,) Anna, by Lawnlsleeves, (365,) Angelina, by Phenomenon, (491,) Anna Boleyne, by Favorite, (252,) Princess, by Favorite, (252,) Brighteyes, by Favorite, (252,) Brighteyes, by Hubback, (319,) Brighteyes, by Snowdon's bull, (612,) Duchess of Athol, by Masterman's bull, (422,) Beauty, by Harrison's bull, (292,) Tripes, by the Studley bull, (626,) out of a cow, which, with her dam, was bred by Mr. Stephenson, of Ketton, great grandfather of the present Mr. Stephenson of Wolviston.

It will be seen that this cow, Waterloo V., is nearly full sister in blood of 3d Duke of Cambridge, (5,941,) the bull which I brought from England. Norfolk, (2,377,) sire of the dam of Waterloo V., was got by Mr. Bates's second Hubback, (1,423,) dam Nonpareil, by Magnet, (2,240,) grand dam by R. Colling's North Star, (459,) great grand dam, Young Sally, (bred by R. Colling,) by Alexander, (1,623,) &c.

Waterloo is a grand cow—by far the best of all that have ever come to America from Mr. Bates's herd; and I am enabled to make the comparison, having seen every cow, bred by Mr. Bates, which has come to America. The only one imported from Mr. Bates's herd, at all approaching her in style, quality, and excellence, was the cow Rose of Sharon, (owned by the Ohio Company,) by Mr. Stephenson's Belvedere (1,706). The public will at length, in Waterloo V., behold a fitting representative of Mr. Bates's herd as to cows, as they have in 3d Duke of Cambridge as to bulls.

When in England, I selected for Col. Sherwood, from Mr. Stephenson's herd, the heifer Red Rose 2d, by Napier, (6,238,) dam Tuberose, by South Durham, (5,281,) grand dam Rose Ann, by Bellerophon, (3,119,) &c., as in the pedigree of Princess III., August number of Agriculturist. Red Rose 2d, was left in England to be bulled by Mr. Stephenson's very superior bull, Earl of Chatham. She will be at Col. Sherwood's, in September instant.

It will be seen that I have been careful to select from the *Princess* tribe of shorthorns, not only those at present in America, but those now coming.

In addition to these fine imported animals to which 3d Duke of Cambridge is to be bred, he will be bred to cows owned by Col. Sherwood, and possessing as much of Mr. Bates's blood as any other in America.

In 1839, Mr. Cope, of West Chester, Pennsylvania, imported from England the bull Yorkshireman, (5,700,) bred by Mr. Bates, and got by Mr. Bates's Shorttail, (2,621,) dam Blanche, by Belvedere, (1,706,) grand dam Lupin, by Belvedere, (1,706,) Tulip, by Lancaster, (360,) Ruby, by Petrarch, (488,) Major, (397,) Stranger, by son of Punch, (531,) Old Roany, by grand son of Punch, (531,) Roaned

Heifer, by Checks, (132,) Lockburn Sall, by John Coates' bull (148). This pedigree it will be seen is both long and rich. Mr. Cope sold Yorkshireman to Mr. Rotch, of Otsego county, N. Y. While in Mr. R's possession, Col. Sherwood bred cows to him. On the arrival of 3d Duke of Cambridge, Col. S. purchased several young cows of Mr. Rotch, got by Yorkshireman, and of approved pedigrees.

In 1845, Col. Sherwood purchased of Mr. Vail, of Troy, N. Y., the bull Symmetry, (166, in the American Herd Book,) a full brother of Mr. Vail's bull Meteor, got by Mr. Vail's imported Duke of Wellington, (3,654,) bred by Mr. Bates, out of Mr. Vail's imported Duchess, (bred by Mr. Bates,) by Duke of Northumberland, (1,940,) &c. Col. Sherwood has females, the get of Symmetry, out of cows got by Yorkshireman. All these females have been or are being bred to 3d Duke of Cambridge. A. STEVENS.

New York, September, 1849.

DEATH OF THOMAS BATES.

THIS distinguished breeder and eminent farmer died at his residence, Kirkleavington, Yorkshire, on the 26th of July last. Although he went down to his grave full of years and honors, still there are few living whose death we should more deeply deplore. He was so hospitable and kind to us, when travelling in England in the summer of 1841, that we shall ever cherish his memory with gratitude and affection.

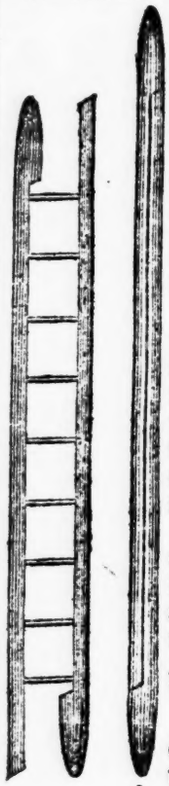
Mr. Bates was of middle height, very erect, and so active in his movements, that, although about 30 years our senior, we found it quite difficult to keep up to him in the various long walks we took together, over the beautiful estates of England. His features were regular, his eyes of a deep blue, and particularly fine, and his complexion as blooming almost as that of a young girl. He was a man of great energy, intelligence, enterprise, and of most indomitable perseverance under difficulties or opposition. His father was a highly respectable farmer, and breeder of improved cattle, and brought his son up to the same profession. Early in life, he became acquainted with the Collings, and was a great admirer of their course of breeding. He endeavored to induce them, before retiring from business, to breed the choice of their short-horn stock exclusively together, assuring them if they did so, they would produce such animals as the world had not yet seen. This choice was the Duchess, the Princess, and the Red-Rose tribes of cattle, whose blood Mr. Bates subsequently succeeded in commingling, and thus produced animals more perfect than were ever before known in England. This was a great achievement, one that did honor to his name, and of which he might be justly proud.

Mr. Bates was a member of the church of England, of untiring benevolence, and one of the most active and energetic in Great Britain in forming the first Bible Societies, and in the distribution of the word of God. Long will the good deeds he has done be held in remembrance in York and Durham, and the neighboring counties.

Mr. Bates died a bachelor, and has left a fine estate worth probably at least half a million of dollars, all of which he had himself accumulated by his own enterprise, industry, and skill.

FOLDING LADDER.

FROM its lightness, compact form, and the facility with which it can be carried about, the ladder denoted in the adjoining cut is the best we have ever seen. It is so constructed that it can be folded up in the form of a pole, when not in use; and consequently will occupy but little room, and can the more easily be conveyed from place to place. It is very convenient for the use of stores, warehouses, dwellings, and for plucking fruit from high vines and trees.



a *b*

FIG. 82.

The letter *a* shows the ladder when opened, and *b*, its appearance when closed. The rongs are fastened by pivots at both ends, on which they freely turn; and when the ladder is folded up, they are admitted into the side pieces by means of grooves.

These ladders may be constructed of any length, less than fifteen feet, at 30 cents per foot, and are offered for sale at the Agricultural Warehouse and Seed Store of A. B. Allen & Co., 189 and 191 Water street, New York.

Whenever they are required to be of a greater length than fifteen feet, the rate per foot must necessarily be increased.

FARM OF MR. LEWIS G. MORRIS.

THIS beautiful farm lies upon the Harlem River, in Morrisania, about one mile north of the High Bridge. Mr. Morris is rapidly getting it into a high state of improvement, and it will not be long before its general crops will be of greatly-increased value.

Orchards.—Among other things, Mr. M. is paying much attention to fruit of a choice quality, orchards of which he is planting in various parts of his farm. The apple trees are set out 40 feet apart, and between each of these is a peach tree, making the distances only 20 feet. But before the apple trees get much grown, the peach trees will have become decayed, and may be cut down. A pear tree is also set equidistant from each four apple trees in two rows, which gives the orchard a quincunx form. This is probably one of the best methods of planting, to economise room, which can be adopted.

After setting out the trees, Mr. M. places a moderate quantity of straw or marsh hay around each, and then covers with stones. This keeps the soil cool and moist; and, however dry the season, he rarely loses a tree. It also keeps the ground firm about the trees, and prevents the body swaying to and fro in every wind, to the great disturbance and injury of the roots. Another advantage, is, it frequently supercedes the necessity of staking.

Farm Buildings.—We were never more struck

with the advantage of placing farm buildings on a moderately inclined side hill, than here. The barn is three stories high; loaded teams can be driven from the highest part of the ground into the upper story. Here they unload the wheat, rye, oats, &c., in sheaf, where it is threshed by a machine, the straw pitched into the yard and stacked or mowed away in the same loft, while the grain falls through a stationary separator in the floor, into a fanning mill in the second story; and after passing through this, it is conducted by spouts into bins in the third story. The second story is appropriated principally to the storage of hay, and into this the teams also are driven and unloaded. All this saves the slow and painful labor of pitching on a high scaffold or mow. The first story is under ground on one side, and is devoted to stabling. Here is an upright horse power, which propels the thresher, fanning mill, hay cutter, mill for grinding grain, and other machinery. The barnyards are spacious, and well arranged for the stock and saving manure.

A Liquid-Manure Tank.—The lawn descends a few feet on the north side of the house, at a suitable distance from which, Mr. Morris has excavated the earth, and built a stone-cemented tank, to receive the wash from the kitchen and water closets. This tank is covered with sod, and cannot be seen from the house nor lawn. An opening is left on the north side for a cart to back up to it. The driver then turns a cock in the tank, and the liquid runs out into the cask on the cart. When full, he drives where it is to be used, and by means of a short hose, distributes the liquid where required. It has been found highly beneficial this season in watering young fruit trees. This is the best contrived tank we have yet seen, and we recommend its adoption wherever the ground inclines from the house, and from the stables also. Even the opening to it can be completely screened from view, if desired. When we first saw it, we supposed it was an ice house, so neatly is it finished.

Improved Stock.—Mr. Morris is a great amateur, and no inconsiderable breeder of fine stock. He began his improvements about ten years since, by importing some of the celebrated Dutch breed of milking cows. To these, he added the very best milkers he could find in this country, such as pure natives, and crosses of the Dutch, Durham, &c. Some of these animals were very extraordinary in their milking properties. Highly fed, they would give from 25 to 30 quarts of milk per day, for several weeks in succession, after calving; and a few of them, if permitted, would hold their milk, all the year round, till calving time again.

But after assembling this stock in his yard, Mr. Morris saw with the quick eye of a refined breeder, that it was wanting, as a whole, in some desirable qualities. To obtain these, then, was a great desideratum. After maturely considering the whole matter, and taking various crosses, he at length settled upon using shorthorn bulls, selected from the best milking families. These, after a few generations, produced him what he wanted, and he can now show a beautiful herd of high grade cows and heifers, which have not deteriorated from the great milking properties of their ancestors; and to this, not only desirable, but, as we hold, absolutely *indispensable quality* of a good cow, he has superadded that of improved shape, better handling, and earlier maturity. As an instance of this last quality, his heifers now generally calve at two years old, and attain full size and maturity at three and a half to four years. Our readers will recollect that native cows can scarce ever calve without injury till three years old, and that they do not attain full maturity till five or six. Mr. Morris thus gains one year upon the unimproved stock, which is certainly a matter of no trifling consideration to the breeder.

As large towns and cities are increasing rapidly, now, throughout the Union, it is becoming a matter of national importance to supply their population with *pure milk* of a *good quality;* otherwise, diseases of a very fatal kind ensue, particularly among infants and small children. But how can *good milk* be obtained if we have not *good animals* to produce it?

Experienced dairymen, who have been engaged in supplying towns and cities with milk, for years, inform us that the average product varies from six to ten quarts per day for each cow, for the first six months after calving. And this, be it remembered, is from *picked,* native cows. Now, if an improved race can be bred, which will average from twelve to fifteen quarts per day, what an addition this would be to the resources of the country. This alone would add millions to its annual productive wealth; for recollect, it costs no more to keep a good cow than it does a poor one, and frequently, owing to her highly-improved, digestive and distributing powers, it does not cost so much.

What a desirable thing, could all the farmers of the United States be convinced of the importance of this, as well as other improvements. How much it would add to their comfort, their happiness, and their power of doing good. Would that they could see this in the light that we do; we should not then be obliged to plead the cause of improvement so often and so vainly as we now do.

The Mansion of Mr. Morris is built of hewn stone, and is in the Italian style of architecture. It is roomy, elegant, and very commodious. It stands on elevated ground, and is surrounded on all sides by a fine, wide lawn, studded with beautiful flowers, shrubbery, and trees. The views from the house are varied and commanding. They embrace Staten Island, the city of New York, the Hudson, Harlem and East Rivers, together with the country around for a distance of 30 miles or more. It is really a desirable spot, and if we are ever so lucky as to be able to possess the like of it, we shall think ourselves particularly fortunate. We then would go to breeding shorthorns, and other fine stock, again; besides growing huge crops, and indulging in other useful fancies, which it is now idle in us to name.

ALPACAS FOR THE UNITED STATES.—Mr. L. T. Brown, of the U. S. Legation, near Bolivia, has written to the Managers of the American Institute, of New York, offering to procure alpacas, vicuñas, or llamas, for American agriculturists. Their cost in Bolivia is from three to five dollars each; but on account of the difficulty of transportation, they would be worth $75 each delivered in New York.

MARSHALL BUGEAUD, DUKE OF ISLY, AS A FARMER.

Among the victims of cholera at Paris, in the month of June last, says a correspondent of the Observer, was the celebrated soldier whose name heads this article. Of his military and political achievements it is not our province to speak in these pages; but it is of his efforts in the improvement of agriculture at his country seat, between Limonsin and Perigord. Here he set an example worthy of all praise, and one which we regret to say is not oftener followed by heroes and politicians.

The canton where he lived, was one of the poorest and most backward regions in France. The peasantry were ill-educated, averse to all innovation upon old modes of farming, and their fields did not yield half what they ought to produce. Marshall Bugeaud undertook to effect a revolution in the agriculture of his province. He met at first with great difficulties. His neighbors laughed at him, and said that with his whimsies he would reduce himself to beggary. His own domestics resisted slily his orders. Every body called him a wild schemer; however, the Marshall stood firm. He even put his own hand to implements of agriculture; he learnt to handle the hoe and the plow. He was the first up in the morning, and the last to retire at night; he led, and encouraged his servants, and his manly perseverance triumphed at last over all obstacles. He introduced into his domains the use of new plows, and other valuable inventions. Far from being ruined, as his neighbors thought, he soon *doubled his property*, and then he had many imitators. In short, his example worked wonders, and at the end of a few years, this canton had completely changed its face.

Marshall Bugeaud, throughout the whole course of his military career, always preserved a decided taste for agriculture. He loved to converse with the peasants, and he gave them good advice. He thought, and rightly, I believe, that it would be happy for France if a part of the laboring population that encumber the large towns would turn their attention to agricultural pursuits. "I sigh," he says in one of his pamphlets, addressed to the people, "when I see in our cities such crowds of people walking about doing nothing, while the fields lack laborers. Many useful things are not done. There is a rich mine to work, and the labor would conduce to the morality of the nation. The peasant, in times of national trouble, does not suffer famine; he sows his grain, he has always a bit of bread, and can wait till quiet is restored. The workman in the factory, on the contrary, when labor is stopped by political revolutions, falls immediately into want and idleness. Then intriguing, ambitious men seize upon him, inflame his passions, impel him to engage in mobs, to spill his blood to feed their ambition. Oh! detestable deceivers of the people, how worthy of contempt ye are."

This was a fixed opinion of the illustrious Marshall. He repeated constantly, and to the end of his life, that the only effectual means to restore the public tranquility, was to diminish the laboring class in cities, and to increase it in the country. But it is easier said than done. How can the workmen in factories be induced to quit their shops in order to lead the hard life of farmers? They lack the physical force, the taste, capital, and skill; and they prefer to suffer in our cities, rather than to go in the heat of the sun and gather the harvest.

A RUSTIC POULTRY HOUSE.

The poultry house described in your September number being rather expensive for many people, I send a sketch, which certainly has the merit of cheapness, if nothing else to recommend it. I notice in almost every country town I travel through, miserable, patched-up, unsightly hovels, occupied as the home for our domestic fowls, though I should think, from their filthy appearance generally, that they were not fit for the pigs to live in. I think this displays very little taste, especially when we consider that with the same labor and materials, expended in a different manner, in "rustic work," for instance, a structure might be made, that would perhaps be rather ornamental than otherwise, certainly

Rustic Poultry House.—Fig. 83.

not disgraceful, and at the same time be as convenient and useful. This kind of work can easily be made by any person accustomed to the use of the saw and axe. All that is required is a little taste, having your plan well digested before commencing, so as to require no alterations.

For the construction of a piece of rustic work like fig. 83, after selecting the situation, join four pieces of saplings in an oblong shape for the sills; confine them to the ground; erect at the middle of each of the two ends a forked post, of suitable height, in order to make the sides quite steep; join these with a ridge pole; rough-board it from the apex downward by the sills to the ground; then cover it with bark, roughly cut in pieces a foot square, laid on and confined in the same manner as ordinary shingles; fix the back end in the same way; and the front can be latticed with little poles with the bark on, arranged diamond fashion, as shown in the sketch—a part to be made with hinges for a door.

Something after this style, placed on the bank of a small stream, and half covered with climbing plants, would make a very pretty home for aquatic fowls.

J. B. D.

Boston, September, 1849.

A FLIGHT THROUGH CONNECTICUT.

IMMEDIATELY after leaving the noise and confusion of that great "Babel," known as New York, and even before I was fairly out of the purlieus, I saw large tracts of land, that, notwithstanding its iron-bound, rocky nature, if cultivated, even with a tithe of the care that John Chinaman bestows upon his soil, it might be made to yield a good support to thousands of the poor creatures that are dragging out a miserable existence in the filthy courts and alleys of the city; while here, within an hour's walk, lie thousands of acres of productive soil, where the healthy atmosphere is such as God gives to the mountaineer, instead of that made for human lungs by the inhuman folly of man in the dark, damp, city cellars, where the spirit of cholera finds the seeds already sown that will produce him an abundant crop.

Much of the land above referred to is covered with bushes, or miserable little half-starved patches of cultivation, or with shanties that are a degree, at least, below the western log cabin. And this is within the sound of the City-Hall bell. And this is "the age of agricultural improvement, is it? The country where we give thousands of dollars annually in premiums for the exhibition of the fattest bulls and boars, and daily proclaim to the world what a great improving agricultural country this is!

But let us proceed. What do we see along the line of railroad towards New Haven? Why the same old stone walls and rickety rail fences, bush pastures, bog meadows, alder swamps, stony fields, and scanty, because unmanured, crops, that were to be seen in the same places fifty years ago. Have these people ever heard of the fact that they might purchase an article called "guano," which has a similar effect upon land that is attributed to manure?

Beyond New Haven, the road passes through several miles of a poor sandy plain, which looks as though it belonged to the "piney-woods" region of South Carolina, rather than to Connecticut. This is perhaps too sterile to be improved with profit; yet, it is a question with me, whether more profit, if we count long life and good health anything, might not be made from this sandy waste, than from some of the rich prairies and bottoms of the great west, California included. In fact, notwithstanding that agriculture, in general, seems to have been conducted in Connecticut for a century or two, upon the same identical "American system" of skin, shave, and waste the soil, and "do as father did," yet every now and then we pass a spot where everything around shows that the light of science, yea, agricultural science, has penetrated far enough to show that, if men would, they might make all of these old, sterile, fields not only productive, but actually more surely profitable than any other employment. But the truth is, and cannot or should not be disguised, the farmers of Connecticut, as a body, have not, do not, and I fear will not, even read anything that is calculated to inform their minds upon the subject of improving and renovating their old worn-out soil.

I left the cars at Meriden, and took a tour through the state eastward, making many stops during a week, and in all the time I never saw nor heard of but one subscriber to an agricultural paper, and he was a gunsmith instead of a farmer. I saw many men mowing many acres that would not produce 500 lbs. of hay to the acre; and at the same time, it was self-evident to me, that a moderate expenditure of labor in under draining, grubbing up bushes and bogs, straightening channels of streams, carrying muck from swamps to gravelly knolls, and a little outlay for manure, lime, guano, &c., would make the same land produce two tons to the acre; and that of a far better quality—though the blackberry crop might be lessened. My attention was particularly drawn to one "meadow," (swamp,) which I have known for more than thirty years, that annually produces about half or three quarters of a ton of "bog-meadow hay" per acre, which has been carried out upon poles every one of those years; for no animal can travel over it. I wish I could recount the number of cattle that have been mired and lost, while trying to get in, to crop the early spring grass upon that little green spot. It contains about seven acres, in an oval shape, surrounded by rocky hills, and was undoubtedly once a shallow pond; for the muck is from one foot to four feet deep, lying upon a hard bottom. It is not apparently fed by springs, but in a wet time is filled with water from the surrounding hills, which, when it rises above the surface, runs off into a little brook at the lower end. Now this is the only level, smooth piece of mowing land upon the farm, and it has been mowed and "poled" probably more than half a century. Let us put the account into figures, in the shape of debit and credit.

THE OLD POND MEADOW,	*Dr.*
For the care and cultivation, ditching, improving, manuring, *nothing*. That's cheap. "Two times naught is nothing" (vide Daboll). "Set that down." "Yes, sir." . .	0.00
To seven cows, heavy with calf, got mired and lost seven different springs, worth $20 each, . .	140.00
To seven other cattle and horses that got mired at different times and were got out—damage and labor of getting them out, "dod rot 'em," $3 each, ...	21.00
To extra labor of poling out hay for 50 years, ...	125.00
To sundry half pair of boots and shoes, mired down and lost, say one every year, ...	25.00
To going to the cedar swamp ten times, (twelve miles,) to cut new hay poles, (240 miles travel,) 4 cts. a mile, ...	9.60
	$320.60

Contra.

50 crops of hay, 5 tons a year, at $5 per ton, ...	$250.00
50 crops of early spring grass, when feed is scarce, for pasture, very valuable, but good for nothing, because cattle can't get at it, .	0.00
Fall feed, a little nipping around the	

edges, where the ground is a little dry, and grass ditto, not worth much; but let it balance the hay poles, ...	9.60
Consolation to the owner to think he always has hay on hand is worth as much as the old shoes and boots lost while poling it out, . .	25.00
Thinking what a nice piece of meadow that would be if it was drained, and having a "darn'd good mind to try it" every year for 50 years, is certainly worth four-and-sixpence a year, Connecticut currency, and cheap at that, ...	37.00
	$322.10
	320.60
Balance in favor of the "Old Pond Meadow,"	$1.50

Now let us suppose that this land had been judiciously drained, and how would the figures look? Why something like this:

The Old Pond Meadow,	*Dr.*
To one month's labor in cutting a ditch through the centre, and around the edges, and about twenty rods to the brook, ...	$30
To cutting and hauling off the bogs and burning them, say $5 per acre,	35
To breaking up and seeding after the land becomes dry, say $3 per acre,	21
To lime, ashes, and manure, average for 50 years, say $3 per acre each year, ...	1,050
	$1,136

Notwithstanding this sum looks so enormous, let us see if the *per contra* will not show a better balance than the preceding account.

Contra.

For an average of 2 tons per acre of Timothy, red-top, and clover hay, upon seven acres for 50 years, (a low estimate, supposing it is all the time in grass, and that is 700 tons,) worth $10 a ton, . . .	$7,000
The pasturage is worth 50 cents per acre per annum, ...	175
The dirt from the ditches and ashes from the bogs, to put upon the old gravelly hills around, is worth nearly as much as it cost to dig it, but say only	25
	$7,200

The balance then will be $6,064 in favor of the improvement.

In fact, I have seen, during the present trip, a hundred just such tracts of land as the one described above, so far as facility of draining is concerned, and at present worthless. Now, is it not singular, shrewd as these Yankees are, that they should continue, generation after generation, to pole out the hay from their old bog meadows, and plow and plant some of the richest natural soil upon their farms, that does not produce half a fair crop, for want of a few under drains, and that, too, in many places where the surface is covered with loose stones, that would serve admirably well for materials to build the drains with? But these people do not read. Nay, they do not plow. "Do not plow?" Nay, they do not plow. The little scratching that they give the land is unworthy of name of plowing. They will actually argue, that to plow deep will ruin the land, as it turns up the poor, unproductive earth. As for subsoil plowing, it is to them a sealed volume. We read in books and newspapers, daily, of the high state of improvements in New England. And in all the villages and manufacturing towns, and upon a great many farms, there is an air of thrift, neatness, and a sort of gentility of appearance, that gives character to the whole country. Then, again, among those who continue generation after generation, to pole out the old bog-meadow hay, and scratch over the bare surface of the gravel hills, or mow over the old fields, "three clips to a handful," there is an unceasing, never-tiring industry; and that, upon any soil, will make a show of thrift. If well directed into an improving channel that would constantly fertilize the soil, what a result would be produced!

I hope my Connecticut friends will not think that I use the lash too freely. I think they need it. They are, as a body, behind the age in agricultural improvements. Their children are all taught to read. But can there be found this day in any one of her district school houses, one single book calculated to teach their children how to cultivate the soil? No! for they think that it would be "book farming." The father thinks no one ever knew so much about farming as himself, and the son never conceived the idea that there was any art to learn, nor that any other person besides father could ever teach him anything about it. "Learn farming in school! Ha, ha! who ever heard of such a thing."

If Connecticut had nothing but her soil to depend upon to insure her prosperity, her citizens would have to learn agricultural improvement, or her people would themselves deteriorate. But let us rest a month, and then, by your leave, I will continue my trip to Boston. Solon Robinson.

July 10th, 1849.

Peeling and Boiling Potatoes.—A loss of the most nutritious portion of the potato is incurred by peeling off the rind and parts directly underneath, as in these the nitrogenized matters, but no starch, chiefly reside, which are dissolved by cold water and coagulated by water while boiling. If potatoes, therefore, are thrown into cold water, and gradually heated, much of their nitrogenized principles will be extracted before the water reaches the point of ebullition; whereas, if it be made to boil before they are introduced, the coagulation will cause these matters to be retained within the tissue of the vegetables lying contiguous to the rind.

To Green-Tea Drinkers.—Most of the green teas consumed in England and the United States, are said to be colored by a preparation of indigo and plaster of Paris. To every 14½ lbs. of tea, one ounce of coloring matter is applied.

Ladies' Department.

BRUSHING AND PRESERVING CLOTHES.

If woolen clothing is very dusty, hang it on a "horse" or line, and beat it with a small rod or cane. Lay it on a clean board or table, and brush it well, first with a stiff brush, in order to remove the spots of mud, if any, and the coarsest of the dirt, and then with a softer one, to remove the dust and properly lay the nap. If the clothes are wet and spotted with dirt, dry them before brushing, and then rub out the spots with the hands. The hard brush should be used as little as possible, and then with a light hand, as it will, if roughly and constantly employed, soon render the garments threadbare.

Should there be spots of grease or tallow on the clothes, hold a piece of ignited paper, a hot iron, or a coal of fire, directly over them, sufficiently near as not to scorch the cloth, and they will immediately disappear by evaporation; or, lay a piece of thick, brown paper over the spot, and press it with a hot iron. If the oil or grease stains the paper, put on another piece, and repeat the operation till it ceases to become soiled.

After the clothes are brushed, they should be hung up in a clean place, free from dust; if intended to remain unused for some time, they should be laid away on the shelves of the clothes press or wardrobe, the place of which should always be in the driest situation possible, as otherwise, they would not only acquire an unpleasant smell, but gradually become mouldy and rotten.

USEFUL RECEIPTS.

A correspondent has furnished us with the following household receipts:—

To Cook Rice.—Soak your rice in salt and water for seven hours, and then put it in fresh water and boil it—only ten minutes after it begins to boil; then empty it out in a colander before the fire until it drains and dries, when you will find a delicious dish, and every grain separated, answering the purpose of a large number of vegetables.

Rice Pudding.—Take half a pint of rice, six ounces of sugar, two quarts of milk, with a little salt, butter, and allspice; put cold into a hot oven, and bake two and a half hours.

Tomato Omelet.—Procure two quarts of perfectly ripe and fresh tomatoes, cut them carefully, and simmer for the space of two minutes over a tolerably quick fire. Cut a few onions, fine, and mix with them a due quantity of crumbled bread and a small lump of butter. When nearly done, beat up eight eggs, and mix them thoroughly with the mass by rapid stirring. In a few minutes, the dish will be done.

Tomato Dumplings.—Take the skin carefully from the tomato without rupturing the meat. The process of making, cooking, and saucing is the same as that pursued in forming and preparing apple dumplings.

Broiled Tomatoes.—Select the largest; cut them in two, and broil them over a moderate fire till done. Add a little butter or salt, and pepper, and you have an excellent dish.

To Preserve Bacon.—Make a strong ley of wood ashes; dip each piece of meat into it; let it dry; and then hang it up in the smoke house, where it will be free from the attack of insects or worms. The taste of the ley will only be perceived on the outside.

Boys' Department.

THE HORSE KNOWN BY HIS EARS.

The size, position, and motion of the ears of a horse are important points. Those rather small than large, placed not too far apart, erect and quick in motion, indicate both breeding and spirit; and if a horse is in the frequent habit of carrying one ear forward, and the other backward, and especially if he does so on a journey, he will generally possess both spirit and continuance. The stretching of the ears in contrary directions shows that he is attentive to everything that is passing around him, and while he is doing this, he cannot be much fatigued, nor likely soon to become so.

It has been remarked that few horses sleep without pointing one ear forward and the other backward, in order that they may receive notice of the approach of objects in any direction. When horses or mules march in company, at night, those in front direct their ears forward; those in the rear direct them backward; and those in the middle of the train turn them laterally or crosswise—the whole seemingly thus to be actuated by one feeling which watches their general safety.

The ear of the horse is one of the most beautiful parts about him, and by few things is the temper more surely indicated than by its motion. The ear is more intelligible even than the eye; and a person accustomed to the horse, can tell, by the expressive motion of that organ, almost all that he thinks or means. When a horse lays his ears flat back on his neck, he most assuredly is meditating mischief, and the bystander should be aware of his heels or his teeth. In play, the ears will be laid back, but not so decidedly nor so long. A quick change in their position, and more particularly the expression of the eye at the time, will distinguish between playfulness and vice.

The hearing of the horse is remarkably acute. A thousand vibrations of the air, too slight to make any impression on the human ear, are readily perceived by him. It is well known to every hunting man, that the cry of hounds will be recognized by the horse, and his ears will be erect, and he will be all spirit and impatience, a considerable time before the rider is conscious of the least sound.—*The Horse and His Rider.*

Gathering and Preserving Nuts.—This is the season for gathering and preserving chestnuts, hickory nuts, butternuts, &c. As soon as the heavy frosts appear, they may be shaken or beaten off the trees with poles, separated, if necessary, from the shells or burrs, and then thinly spread in some garret or airy loft to dry, where they should be kept until ready for sale or use. If suffered to be packed up in boxes or casks, before they are dry, all kinds of nuts will become musty and strong, greatly deteriorating in their value, whether they are sold or consumed at home.

FOREIGN AGRICULTURAL NEWS.

By the steamer Europa, we are in receipt of our foreign journals to 1st September.

MARKETS.—*Ashes* a material advance. *Cotton* advanced and then receded the past month, leaving it at about the same rates as per our last. *Flour* and *Wheat* a decline. *Indian Corn* remains unchanged. *Cheese* in great request. *Lard* a considerable advance. *Tobacco* an upward tendency. *Wool* the same.

The Crops throughout Europe are very abundant, and rather low prices must be anticipated.

The Potato Disease.—The old potato disease has re-appeared in Ireland, where the fields present evident marks of its devastation.

Death of Mehemet Ali.—His Highness Mehemet Ali, Pascha of Egypt, died at Alexandria on the 2d of August. On the day following, his remains were taken up to Cairo, where they were buried on the 4th, in the new alabaster mosque, built by himself, in that citadel.

Literary Prizes.—The Belgian government has offered a prize of 5,000 francs, and another of 1,000 francs with a gold medal. The first for the best work on general agriculture, and the second for the best treatise on the diseases of potatoes. Foreigners are invited to compete, and manuscripts are to be sent to the Minister for the Interior before the 1st of January next year.

To Destroy Weevils.—Corn and pea weevils, both in the egg, as well as in the perfect state, are easily destroyed by exposing them for a certain time in contact with carbonic-oxide gas.—*Agricultural Gazette.*

Query in Regard to the Potato Disease.—As a mere guess at a remedy for the potato disease, it may be worth the inquiry of geologists and chemists whether the native soil of the potato, in South America, contains any elements which are wanting, or deficient in that of Europe. Those who have been in volcanic districts are aware how every fissure and cranny of the earth is at least occasionally charged with gases of mixed composition, but especially sulphureous, which may be smelt, in still weather, by those walking on the surface, and which must have some influence on the vegetation of those regions. Mexico and the Andes are doubtless similarly circumstanced, and the peculiar constitution of plants, native to that range, may possibly have some dependence on those conditions of growth. Are the potatoes in the kingdom of Naples attacked by the disease? Because, if they are, the presence of sulphur in the soil is no preventive against the potato plague.—*Ibid.*

New Process for Preserving Wood.—M. Brochard's plan for preserving wood, which differs very little from other methods now in use, or at least proposed for the same purpose, is, first by means of a pneumatic apparatus, worked by a steam engine, to exhaust the wood of its sap and other watery liquids; then by means of compression, to force into the exhausted pores two other liquids, one after the other, which, combining in the interior, form an insoluble salt of iron. The author produced before the Academy of Sciences, at Paris, two pieces of deal, which had been experimented on, at Cette, by the chief engineer of the Ponts et Chaussées. These two pieces of wood had been used as piles, and had been covered by sea water to the depth of three or four yards; one of them which had not been in any way prepared, was very much attacked by the worm, whilst the other, which had been prepared in M. Brochard's way, was scarcely attacked at all.—*Foreign Journal.*

Extraordinary Invention.—A Mr. Appold has invented a remarkable machine, called the "Centrifugal Pump," for draining marshes, &c., and a most ingenius affair it is. You have heard of the turbine—a small box waterwheel, possessing extraordinary capabilities for work. Well, Mr. Appold's model contains such a wheel made of tin, a little thicker, but no larger, than a halfpenny. This is fitted at the bottom of a square tube dipping into a small cistern containing water, which may represent a lake, &c. The little wheel being made to rotate with great velocity, throws up water rapidly into the tube above itself, until it overflows in a continuous stream at the top, and the volume of its stream is such as to deliver eight gallons per minute; and on applying a nozzle, the stream is driven to a distance of twenty feet. This, you will say, is a marvellous effect from so apparently insignificant a cause; but a wheel, about fifteen inches in diameter, exhibited at the same time, will deliver 1,800 gallons per minute; it requires to be worked by an engine of four-horse power. Mr. Appold has lately proposed to the engineer of the Dutch government to fix a similar wheel on the Haarlem Sea, now in process of being drained, by forty pumps, driven by steam. A centrifugal pump of forty feet in diameter would do more work than all the others put together, and would deliver—so the inventor asserts—1,500,000 gallons per minute. With such power at command, one would think we ought never more to hear of ships foundering at sea; and the emptying and reclamation of the Zuyder Zee resolves itself into a possibility.—*Ibid.*

Profits of Public Slaughter Houses in France.—In all cases where these have been built in France, the revenues have been such as to make such constructions good speculations. At Paris, in 1847, the gross revenues were 1,200,000 francs, nearly; the expenses, including *employés*, repairs, water, lighting, &c., were not 140,000 francs, leaving 1,060,000 francs net to pay the interest on a capital of 18,000,000 francs. In the town of Havre, the abattoirs are built upon 18½-year leases, and yet the proprietor makes money by his speculation. At Caen, the abattoirs produce a net revenue of 24,000 francs to pay the interest of a capital of 301,000 francs. Everywhere the results are about the same; nor can there be any reason to doubt that in England the results would be equally favorable. The butchers of Paris, at first, violently opposed the establishment of the abattoirs; but now they are so convinced of their utility and commodity, that they would almost as vigorously oppose any return to the former system. Indeed, it must evidently be to the interest of the butcher that his meat be killed in the most perfect condition, to ensure its preservation, and to satisfy the public that every precaution is taken to ensure a supply of wholesome meat.—*Builder.*

Hatching Chickens.—An American, named Williams, near Champigny, France, has an establishment for the artificial incubation of eggs. He has been very successful, following, as near as possible, the means adopted by the mother hen, in the application of the artificial heat. As in her case, he applies the heat from above, and following her instinct as his guide, he frequently removes the heat, leaving the eggs free, to imbibe the necessary amount of oxygen. So far, his success has been complete. He finds ready sale for all his broods, which are sent to market, when twenty days old. His furnaces are kept constantly at work to furnish *poulets* for the Paris markets.—*Paris Paper.*

Waterproof Composition for Cotton Cloth.—Take of old, pale linseed oil, 3 pints; sugar of lead, 1 oz.; and white resin, 4 oz. The sugar of lead must be ground with a small quantity of the oil, and then added to the remainder, incorporated with the resin by means of gentle heat. The composition is to be laid on with a brush, shortly after which it dries, on exposure to the air. White linen or cotton fabrics, for protecting tender plants and vines, covered with it, exclude as little light and heat as any other material except glass; besides, it does not mildew.—*English Paper.*

Editors' Table.

PROFESSOR JOHNSTON'S ADDRESS.—We listened with great pleasure and instruction to the very able address of Professor Johnston, who recently left England for the purpose of examining the agriculture of this country and the provinces of British America. Though the address required a full hour and a half in the delivery, it was listened to with unflagging interest till its close. Its main features, after the introduction, consisted in a succinct history of the present state of European agriculture, as exhibited in the several countries, most of which he has personally visited. The latter part of the address was on miscellaneous topics connected with the subject, in which various important suggestions were made for the advancement of this great interest. We shall soon see this valuable address scattered broadcast over the Union, and hope it may reach every farmer's fireside.

We understand Professor Johnston will not return to Europe before the ensuing spring, and we earnestly recommend to every society or community, who can appreciate the benefits of agricultural science, that, for their own interest, they offer him such remuneration as will ensure a course of his invaluable lectures. More particularly do we, of New York, owe it to ourselves and our community, that we secure from him a full course. This will come with much better effect from the Agricultural Board of the American Institute. The promotion of national objects and improvements should be one of its primary merits; and as the advancement of agriculture is professedly one of its leading objects, there will scarcely occur a more favorable opportunity of carrying out their patriotic purposes. Millions of American gold have here been worse than thrown away on English comedians and their cognate professions. An opportunity is now afforded where a few hundreds or thousands may be most worthily bestowed, and for our own lasting honor and advantage. We shall see if Americans have the enlightened self-interest—the wisdom to do it.

SALE OF STOCK BY MR. MORRIS.—We desire to call attention to the advertisement of Mr. Lewis G. Morris, in this number of our paper. His cows are celebrated for their milking qualities, and now is an excellent opportunity for dairy farmers to supply themselves with good milkers. The produce of a good milker, sold in this market, will net fifty dollars a year; while that of a poor one scarcely ever pays for her keep. Two railroads now run from this city through Westchester and Putnam counties, and this enables the farmers to send their milk daily to the city, for sale, at a high price. They have, therefore, every motive to induce them to improve the milking qualities of their cows. For a more particular notice of the breeding of Mr. Morris' stock, see an article on his farm, at page 318 of the current volume.

DEATH OF HENRY COLMAN.—We learn, with deep regret, that Mr. Colman died of fever, at Islington, London, on the 17th of August last. He had engaged his passage in the steamer Caledonia, and was to have sailed the day after his death. Mr. Colman was about 65 years old. His health had not been very good for several years. We received a letter from him, dated a few weeks previous to his demise, at which time he seemed in excellent spirits, and was anticipating a quick return to his native land. We had been personal friends for upwards of fifteen years.

Mr. Colman was a native of Boston, Massachusetts, and was educated for the ministry. He devoted himself assiduously to his profession, for several years, but having an unconquerable love for agriculture, after paying considerable attention to the cultivation of a beautiful farm, at Deerfield, in the fertile valley of the Connecticut, he accepted an appointment from the Massachusetts Legislature, as Agricultural Commissioner for that commonwealth. Several volumes of valuable reports attest his zeal and fidelity in discharging the duties of that laborious office.

In the month of April, 1843, Mr. Colman embarked for England, with the intention of making an agricultural survey of Europe. The valuable information which he gathered, while abroad, may be found in his report, in ten parts, issued from time to time, in the course of his absence abroad.

Mr. Colman was a man of fine, commanding, personal appearance, very intelligent, with superior conversational powers, winning manners, and possessed one of the kindest and most benevolent hearts we ever knew. He made himself particularly agreeable abroad among all classes; and the death of few men is more regretted than his, by a large circle of friends and acquaintances. His last work published was a series of familiar letters to his friends while abroad. These abound with information, and are written in a singularly agreeable vein. We understand, while abroad, he gathered the materials for other works, which we trust his family will in due time give to the public.

NATIVE BANANAS.—The New-Orleans Picayune states that Mr. Benjamin Florence, of Lafayette, La., has raised some bananas not at all inferior to the West-India specimens. He has from 40 to 50 plants, each bunch containing from 150 to 180 fruits.

COMPARATIVE GROWTH OF PEAS.—Mr. Thomas Mecham, of Philadelphia, made an experiment with several kinds of peas and noted the periods of their harvesting. They were all sowed on the 3d of April, in the same soil and situation, and grew, in every respect, under equal circumstances. The time when each produced pods, fit for use, stands opposite their respective names.

Prince Albert,	June 10th.
Bishop's dwarf,	" 17th.
Thompson's dwarf,	" 17th.
Early May,	" 21st.
Early June,	" 21st.
Early frame,	" 21st.
Early Charlton,	" 21st.
Royal-dwarf marrow,	" 25th.
White marrow,	" 25th.
Black-eyed marrow,	" 28th.
Blue Prussian,	" 30th.
Blue Imperial,	" 30th.
Banksian marrow,	July 2d.
New mammoth,	" 2d.
Dwarf sugar,	" 2d.

INTERESTING AGRICULTURAL EXPERIMENTS.—The Philadelphia Ledger notices some recent experiments in wheat and flour which prove that both contain water, and that the quantity is more in cold countries than in warm. In Alsace, from 16 to 20 per cent. In England, from 14 to 17 per cent. In the United States, from 12 to 14 per cent. In Africa and Sicily, from 9 to 11 per cent. This accounts for the fact that the same weight of southern flour yields more bread than the northern. English wheat yields 13 pounds more to the quarter than the Scotch. Alabama flour yields 20 per cent. more than Cincinnati. And in general, American flour, according to the authority of one of the most extensive London bakers, absorbs 8 to 10 per cent. more than its own weight of water in being made into bread than the English. The warmer the country, the more is the water dried out of the grain before it ripens, and hence, when made into bread, it absorbs more water again, and is therefore more valuable.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, SEPTEMBER 17, 1849.

ASHES, Pots,	per 100 lbs.	$7 00	to	$7 12
Pearls,	do.	6 50	"	6 62
BALE ROPE,	lb.	9	"	11
BARK, Quercitron,	ton,	28 00	"	30 00
BEANS, White,	bush.	75	"	1 25
BEESWAX, Am. Yellow,	lb.	19	"	22
BOLT ROPE,	do.	11	"	12
BONES, ground,	bush.	40	"	55
BRISTLES, American,	lb.	25	"	65
BUTTER, Table,	do.	15	"	25
Shipping,	do.	9	"	15
CANDLES, Mould, Tallow,	do.	10	"	13
Sperm,	do.	25	"	40
Stearic,	do.	20	"	25
CHEESE,	do.	5	"	10
COAL, Anthracite,	2,000 lbs.	5 00	"	6 00
CORDAGE, American,	lb.	11	"	13
COTTON,	do.	8	"	12
COTTON BAGGING, Amer. hemp,	yard,	15	"	16
FEATHERS,	lb.	30	"	40
FLAX, American,	do.	8	"	9
FLOUR, Northern, Southern and West'rn	bbl.	4 25	"	5 38
Fancy,	do.	5 50	"	6 00
Richmond City Mills,	do.	6 50	"	6 75
Buckwheat,	do.	—	"	—
Rye,	do.	3 00	"	3 06
GRAIN—Wheat, Western,	bush.	1 05	"	1 30
Red and Mixed	do.	85	"	1 15
Rye,	do.	58	"	60
Corn, Northern,	do.	62	"	64
Southern,	do.	60	"	62
Barley,	do.	60	"	63
Oats,	do.	34	"	42
GUANO, Peruvian,	2,000 lbs.	47 00	"	50 00
" Patagonian	do	30 00	"	35 00
HAY, in bales,	do	45	"	50
HEMP, Russia, clean,	ton.	195 00	"	200 00
American, water-rotted,	do.	160 00	"	220 00
American, dew-rotted,	do.	140 00	"	175 00
HIDES, Dry Southern,	do.	8	"	9
HOPS,	lb.	6	"	15
HORNS,	100.	2 00	"	10 00
LEAD, pig,	do.	4 50	"	4 55
Pipes for Pumps, &c	lb.	5	"	7
MEAL, Corn,	bbl.	3 18	"	3 50
Corn,	hhd.	14 00	"	15 00
MOLASSES, New Orleans,	gal.	22	"	28
MUSTARD, American,	lb.	16	"	31
NAVAL STORES—Tar,	bbl.	1 68	"	1 87
Pitch,	do	1 25	"	1 75
Rosin,	do.	1 65	"	1 15
Turpentine,	do.	2 50	"	2 75
Spirits Turpentine, Southern,	gal.	35	"	37
OIL, Linseed, American,	do.	79	"	80
Castor,	do.	1 50	"	1 70
Lard,	do.	60	"	70
OIL CAKE,	100 lbs.	1 25	"	1 50
PEAS, Field,	bush.	75	"	1 25
Black-eyed,	2 do	1 50	"	1 75
PLASTER OF PARIS,	ton.	2 00	"	2 75
Ground, in bbls.,	of 300 lbs.	1 12	"	1 25
PROVISIONS—Beef, Mess,	bbl.	12 00	"	14 00
Prime,	do.	9 50	"	12 00
Smoked	lb.	6	"	12
Rounds, in pickle,	do.	4	"	6
Pork, Mess,	bbl.	10 00	"	13 00
Prime,	do.	7 00	"	10 50
Lard,	lb.	6½	"	7½
Bacon sides, Smoked,	do.	3	"	4½
In pickle,	do.	3	"	4
Hams, Smoked,	do.	5	"	9
Pickled,	do.	4	"	7
Shoulders, Smoked,	do.	4	"	6
Pickled,	do.	3	"	4
RICE,	100 lbs.	3 25	"	4 06
SALT,	sack,	1 17	"	1 30
Common,	bush.	20	"	35
SEEDS—Clover,	lb.	5½	"	7
Timothy,	bush.	2 00	"	3 50
Flax, clean	do.	1 30	"	1 40
rough,	do.	1 20	"	1 30
SODA, Ash, cont'g 80 per cent. soda,	lb.	3	"	—
Sulphate Soda, ground,	do.	1	"	—
SUGAR, New Orleans,	do.	4	"	6
SUMAC, American,	ton,	35 00	"	37 00
TALLOW,	lb.	7	"	8
TOBACCO,	do.	3	"	9
WHISKEY, American,	gal.	24	"	26
WOOLS, Saxony,	lb.	40	"	60
Merino,	do.	35	"	40
Grade Merino	do.	30	"	35
Common		20	"	30

NEW-YORK CATTLE MARKET.

At Market.—2,000 Beef Cattle, (1,100 southern, the remainder from this state and east,) 65 Cows and Calves, and 5,500 Sheep and Lambs.

Beef Cattle.—The market for Beeves, though active, is rather overstocked, the sales varying from $5.50 to $8 per hundred. The number on hand, unsold, is estimated at 200.

Cows and Calves.—These vary from $18 to $45. The demand rather dull—15 left over.

Sheep and Lambs.—These are plenty; the Sheep selling from $1.25 to $5.25, and the Lambs from $1 to $3.25 each. The number left unsold, 300.

REMARKS.—Ashes, Cotton, and Wool have advanced since our last, the latter article from ten to twenty-five per cent., according to quality. This is encouraging to the wool grower. Flour and Grain have slightly receded.

Crops.—All the grain crops have proved a full average, taking the aggregate of the country. Corn never was better, though it is late in ripening. But the fall weather, providentially, has been uncommonly warm and fine for this purpose; had it been the reverse, very little corn would have ripened this season, north of latitude 41 degrees. Cotton has suffered materially, and will undoubtedly be a short crop. The drought has continued up to this date quite severe in parts of the west and north, so much so, as to materially affect the pastures, and greatly reduce the hay crop. In Nova Scotia, and some other parts of the British Provinces, we understand, not over a quarter so much hay will be cut this season as usual, on account of the severe drought.

Money abundant, and business very active.

The Cholera has ceased, and the city now is very healthy.

TO CORRESPONDENTS.—Communications have been received from Z. C. Robbins, Henry A. Field, William H. Sotham, Nathan Chapin, Edmund Troye, David Miller, and Reviewer.

Employment for Immigrants.—D. M., of Brownsville, Pa.—A German farmer, capable of taking charge of a herd of cows, cannot be obtained for less than $200 a year.

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Sept. 1yr*.

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SEVENTH EDITION; Enlarged.

THE AMERICAN FARM BOOK, or compend of American Agriculture; being a practical treatise on soils, manures, draining, irrigation, grasses, grain, roots, fruits, cotton, tobacco, sugar cane, rice, and every staple product of the United States, with the best methods of planting, cultivating, and preparation for market. Illustrated by more than 100 engravings. By R. L. Allen, author of Diseases of "Domestic Animals," and editor of the "American Agriculturist;" together with Browne's Memoir on Indian Corn, including Barlow's celebrated Poem. Published and for sale by

C. M. SAXTON, 121 Fulton st., N. Y.

FOR SALE,

A NURSERY, of the very choicest Fruit and Ornamental Trees, situated in the village of Astoria, L. I., a few hundred yards from the steamboat landing. To the Nursery, there are attached five acres of good land, with a house and barn, which will be leased to the purchaser of the trees, for the term of five or ten years. This is a rare chance for a man well acquainted with the business, as the trees will be sold low, the former owner having left for California. For further particulars apply to R. M. BLACKWELL & CO.,

o 2t.* 144 Front st., N. Y.

PERUVIAN GUANO

FOR Sale, at Bating Hollow, Long Island, by

jy3t AZEL DOWNS

IMPROVED DAIRY STOCK AT AUCTION.

THE subscriber will offer on the 13th day of October next, at 1 o'clock, P. M., at his farm, from 30 to 40 head, being about one half of his present herd.

Their Breed is mainly the best Improved Shorthorn, crossed with the Amsterdam Dutch, selected and bred expressly by the subscriber with reference to milking qualities.

They consist of Cows, two-year-old Heifers, one-year-old Heifers, Heifer Calves from one to ten months old, and several Bulls.

Cows and heifers, old enough, are in calf to the proper bulls. A credit of six months will be given on all sums over fifty dollars, with interest, on satisfactory paper. Stock purchased to be sent a distance, will be delivered by the subscriber on shipboard or railcar, in the city of New York, free of risk and expense to the purchaser.

A catalogue and description of each animal, will be given on the day of sale.

The awards of premiums by the American Institute, and Westchester-County Agricultural Society, give evidence of my success as a breeder.

Conveyances will be in waiting at Fordham Depôt, Harlem Railroad, to convey persons to the sale.

Should the weather prove stormy on the day of sale, it will be postponed until the next fair day.

L. G. MORRIS.

Mount Fordham, 11 miles from the city of New York, August, 1849.

DR. UNDERHILL'S MINERAL FIRE AND WATER-PROOF PAINT.

THIS substance is found near Hoffman's Ferry, in the county of Schenectady, New York. It has been well tested, and when mixed with linseed oil, and applied the usual way, with a brush, it proves to be a paint of superior quality. When dried, it forms a slaty surface, perfectly adhering to wood, brick, or stone, and is not liable to peel off nor crack from the effects of ordinary heat, wet, and cold. Neither will it dissolve when subjected to nitric, sulphuric, nor muriatic acids.

Roofs painted with this pigment are guarded against moisture, and will not take fire from the burning of adjacent buildings sooner than those covered with slate or tin. From the smooth surface it forms, when rubbed down with sand paper or pumice, it is admirably adapted for the first coating of carriages and all other articles where a fine finish is required. Other paints, of various tints, strongly adhere to it, and receive a high polish. Its natural color, when in powder, is light slate; but it can be changed to brown or drab, by the addition of yellow or red, suitable for painting wood or brick, without materially affecting its durability. Wood covered with it, does not shrink nor swell, as with other paints, while on brick work, from its stone-like surface, it is not injured by the weather.

This paint is not an *artificial* but a *natural* article, being reduced to a powder by grinding, and mixed quite thick with raw or boiled linseed oil. One hundred pounds will cover about 1,000 square feet, and generally, two coats will be sufficient, if carefully put on. It requires some time to dry, but generally, the second or third day after it is applied, if exposed to the sun, it becomes quite hard. The longer it is exposed to the weather, however, the more it adheres, and the firmer it grows. For fences, out-buildings, and roofs, it stands unsurpassed.

To satisfy the public that this paint is no hoax, the undersigned pledges himself to refund all monies, if it does not prove to be all that is claimed as above.

This paint is prepared and for sale, at Charlton, Saratoga county, New York, by the subscriber, from whom all orders will receive prompt attention. It may also be had at the Agricultural Warehouse and Seed Store of A. B. Allen & Co., 189 and 191 Water street, in the city of New York.

o ABEL UNDERHILL.

SELLING OFF—LINNÆAN BOTANIC GARDEN AND NURSERY.

LATE OF WILLIAM PRINCE, DECEASED,

Flushing, Long Island, near New York.

WINTER & CO., PROPRIETORS.

IN consequence of the decease of the junior, and of the advanced age of the surviving partner, who, therefore intends to relinquish the business, the entire stock of this establishment, comprising every description, including the newest and choicest varieties, of FRUIT AND ORNAMENTAL TREES, SHRUBS, VINES, AND PLANTS, ROSES, GREENHOUSE PLANTS, BOX EDGING, &c., will be disposed of in lots to suit purchasers, at very reduced prices, in order to close the business as speedily as possible.

Orders accompanied with the cash to the amonnt of ten dollars or upwards, will be supplied at a reduction of twenty-five per cent. from the usual prices.

Nurserymen, venders, and others wishing to purchase, by wholesale, will be supplied at such reduced prices, according to quality and quantity, as will probably prove satisfactory to them.

It is requested that letters of inquiry, &c., be *post paid*. Descriptive Catalogues gratis. sept 2t

COMMERCIAL GARDEN AND NURSERY.

PARSONS & CO., at Flushing, near New York. The proprietors of this establishment invite public attention to their large assortment of every desirable variety of Fruit and Ornamental Tree or Shrub. Their importations of everything new in Europe are annually continued, and they offer a very large variety of Ornamental Trees and Shrubs imported expressly for arboretums and pleasure grounds. Their collection of Roses is annually enriched by novelties from abroad, many of which may be found described in their new work on the Rose, recently published. Fruit Trees receive their particular attention, and are propagated under their personal supervision; this care, with their possession of extensive specimen grounds, in which is tested every variety of fruit they cultivate, enables them confidently to guarantee the genuineness of the varieties.

Their care in pruning and cultivation enables them also to send out thrifty and well-formed trees. From their large scale of propagation, they can offer to dealers very liberal discounts, where hundreds or thousands are taken. Orders or inquiries can be addressed to the proprietors at Flushing, near New York, where catalogues will also be furnished. They have established a Branch at Brighton Depôt near Boston and by the entire success of their trees transplanted thither have thoroughly proved the superior adaptation of Long-Island Trees to the soil and climate of any part of New England. This they attribute to the perfect maturity attained by the wood before frost, which renders the trees suitable for transportation to any latitude.

At the season of transplanting, a salesman will be at their Brighton Branch to furnish those who may prefer obtaining their supply thence. mhtf

THE QUEEN'S DICTIONARY.

THE Messrs. Merriam, some time since, transmitted to Queen Victoria, through the hands of George Bancroft, the American Minister, a magnificently-bound copy of their unabridged edition of Webster's Dictionary. It was given to the Queen through her husband, Prince Albert, and its receipt has been acknowledged by the Secretary of His Royal Highness. The acknowledgment is of course directed to His Excellency, the American Minister, and we have the pleasure of presenting it to our readers.—*Springfield Republican.*

SIR.—I have the honor to inform your Excellency, that Her Majesty, the Queen, has accepted, with great pleasure, the copy of the last edition of Webster's English Dictionary, which, according to the directions you gave me, was laid by me before His Royal Highness Prince Albert, and was presented afterwards by the Prince to Her Majesty, on the part of the publishers, Messrs. Merriam; and I have been commanded to express to your Excellency, and to beg of you to transmit to Messrs. Merriam, Her Majesty's gracious thanks for this beautiful present, which, Her Majesty highly values, not only on account of the great merits of the work itself; but still more so, as a sign of those feelings towards Her Royal Person on the part of a large portion of the Anglo-American nation, which your Excellency informed me it was intended to represent, and which, after the political disunion which has taken place between the United Kingdom, and the United States, could not indeed have found a more appropriate way of expressing themselves than the presentation to Her Majesty of a work on the English language which directly refers to that powerful and indissoluble bond by which the two cognate Nations on the Eastern and Western side of the Atlantic will forever remain united. Your Excellency, as well as Messrs. Merriam, will no doubt, feel great pleasure in learning that Her Majesty has placed the work presented through your Excellency, amongst the few selected volumes which compose Her own private Library.

I have the honor to be, Sir, your Excellency's faithful servant. C. MEYER, Sec'y to H. R. H. Prince Albert.

Buckingham Palace, June 20th, 1849.

His Excellency, the American Minister.

Price $6.00—For Sale in New York by C. M. SAXTON, and by booksellers generally throughout the United States. o 1t

PATENT FANNING MILLS AND GRAIN CRADLES.

GRANT'S celebrated Fanning Mills and Grain Cradles have been awarded six first premiums at the New-York State Fairs; also, at the American Institute of New York and several County Fairs. Wherever exhibited, they have taken the first premium over all other mills. The great encouragement we have received from dealers and agriculturists has induced us to enlarge our business. All orders will receive prompt attention. J. T. GRANT & CO.,

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The above mills are also for sale by A. B. ALLEN & CO., 189 & 191 Water street, New York. my 6t

IMPROVED STOCK.

DURHAM, Hereford, and Devon Cattle; Saxon, Merino, Cotswold, Leicester and South Down Sheep; Lincolnshire, Suffolk, and Chinese Pigs. All these superior breeds, can be had of the subscriber, of the best quality, and will be shipped to any port of the country. Autumn is the best time to execute such orders. SAMUEL ALLEN,

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ALLEN'S IMPROVED PORTABLE RAIL ROAD HORSE POWER AND OVERSHOT THRASHER AND SEPARATOR.

THE advantages of the above horse powers are—1. They occupy but little more space than a single horse. 2. They can be moved by the weight of the horse only, by placing them at an angle of 10 or 15 degrees. 3. They are comparatively light and portable, and can be easily transported. 4. They are simply constructed, not liable to get out of order, and move with little friction, the revolving plane geering without any complex or intermediate wheels, directly into the pinion upon the shaft on which the pully belt runs.

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" Separator and fixtures,	$7
" Bands for driving, etc.,	$5
" Wood-sawing machine, complete, and in running order,	$35

The price of the double power, thresher, separator, &c., complete. is $145, including rights of using. The above are sold singly or together as desired.

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